MONTHLY BULLETIN of REGIONAL and TELESEISMIC EVENTS RECORDED with GRF- and GRSN-STATIONS in GERMANY

(produced by SZGRF/BGR - ERLANGEN and partly by CLL - Observatory)

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Please note that local events recorded in Germany are part of the "LOCAL BULLETIN".

(Format desciption at the end of the bulletin)

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/01	01:37:13.6	54.655S	1.148E	10G	5.1	5.1		NEIC

Bouvet Island region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e Pdiff	Z	01:51:39.2	106.1	187.1					
	e PP	Z	01:55:52.1							
	e SKSac	R	02:02:11.9							
	e Sdiff	T	02:03:30.0							
	e PS	R	02:05:11.1							
	e PPS	R	02:06:04.3							
	e SS	R	02:10:57.8							
	e LR	Z	02:27:43.6							
	e L	Z	02:37:51.3			22.0	338		4.8	
GRFO	e L	Z	02:37:15.9	104.3	186.0	19.9	579		4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/01	03:19:58.4	23.642N	89.967E	33.0N	4.7			SZGRF
2003/08/01	03:19:38.1	22.857N	92.357E	10G	4.8			NEIC

Bangladesh

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:30:36.0	67.2	81.1	1.6	9	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/01	13:46:42.2	32.630N	141.600E	33.0N	5.4			SZGRF
2003/08/01	13:46:48.0	32.746N	141.155E	80*	5.1			NEIC

Southeast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	13:59:14.4	84.4	41.6	0.9	91	6.0		
	e pP	Z	13:59:34.7							
NRDL	e P	Z	13:59:15.8	84.7	39.6	1.1	20	5.3		
CLZ	e P	Z	13:59:18.2	85.1	39.7	1.2	77	5.7		
WERD	e P	Z	13:59:19.2	85.3	41.1	1.1	28	5.3		
MOX	e P	Z	13:59:19.8	85.5	40.6	1.4	48	5.4		
GEC2	e P	Z	13:59:21.9	85.9	42.0	1.5	24	5.1		
UBBA	e P	Z	13:59:22.2	86.0	39.4	1.2	16	5.0		
WET	e P	Z	13:59:22.9	86.1	41.4	1.3	14	4.9		
GRA1	e P	Z	13:59:24.7	86.4	40.3	1.2	59	5.6		
BUG	e P	Z	13:59:24.8	86.6	37.4	1.1	47	5.5		
TNS	e P	Z	13:59:27.6	87.1	38.2	1.4	20	5.3		
WLF	e P	Z	13:59:34.4	88.4	36.5	1.6	54	5.5		
BFO	e P	Z	13:59:34.9	88.6	38.1	0.8	9	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/01	20:28:43.5	16.468S	173.783W	200G	4.3			NEIC

Tonga

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	20:48:10.7	146.5	8.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/02	02:43:09.1	18.236S	177.913W	402D	4.5			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA3	e pPKP	Z	03:03:48.9	147.6	16.5					
GRA1	e PKPbc	Z	03:02:09.3	147.7	16.4					
	e PKPab	Z	03:02:12.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/02	05:06: 2.8	33.700N	24.530E	33.0N	3.9			SZGRF

Central Mediterranean Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	05:10:01.9	17.2	148.0	0.9	10	3.9		
WET	e P	Z	05:10:07.7	17.7	146.4	1.2	15	4.0		
GRA2	e P	Z	05:10:18.8	18.7	143.7					
GRFO	e P	Z	05:10:19.5	18.8	143.5	1.3	16	4.1		

WERD	e P	Z	05:10:22.2	19.0	147.2	1.0	5	3.6	
MOX	e P	Z	05:10:26.4	19.4	146.0	0.7	3	3.6	
CLL	e P	Z	05:10:27.5	19.5	150.1	0.6	5	3.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/02	10:18:42.2	42.944N	17.572E	10.0G			4.9	SZGRF
2003/08/02	10:18:37.8	42.983N	17.772E	10G	4.7	4.4		NEIC

Adriatic Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
ARSA	e Pn	Z	10:19:49.4	4.6	158.8					4.7
KBA	e Pn	Z	10:19:58.8	5.2	141.0					4.8
MOA	e Pn	Z	10:20:02.7	5.5	151.9					4.9
	e Sn	N	10:21:03.7							
WTTA	e Pn	Z	10:20:10.7	6.1	132.5					
GEC2	e Pn	Z	10:20:16.4	6.5	152.7					4.7
	e Sn	N	10:21:28.2							
WET	e Pn	Z	10:20:23.9	7.0	149.3					5.0
BFO	e Pn	Z	10:20:42.3	8.5	125.6					
MOX	e Pn	Z	10:20:46.4	8.7	148.9					
	e Sn	N	10:22:20.9							
CLL	e Pn	Z	10:20:50.9	8.9	156.9					
TNS	e Pn	Z	10:20:59.7	9.7	135.0					
CLZ	e Pn	Z	10:21:07.7	10.2	147.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/02	11:52: 1.8	49.850N	151.600E	350.6N	4.9			SZGRF
2003/08/02	11:52:26.8	51.308N	150.413E	540D	4.4			NEIC

Northwest of Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z	12:02:53.2	71.0	25.0	0.8	7	4.8		
CLL	e P	Z	12:02:54.2	71.2	26.5	1.0	27	5.3		
CLZ	e P	Z	12:02:56.3	71.5	25.1	0.7	12	5.1		
WERD	e P	Z	12:03:00.0	72.2	26.0	0.7	6	4.7		
MOX	e P	Z	12:03:00.1	72.2	25.6	0.8	8	4.8		
UBBA	e P	Z	12:03:01.4	72.5	24.7	0.7	5	4.6		
GRA2	e P	Z	12:03:06.1	73.2	25.3					
GRFO	e P	Z	12:03:06.4	73.2	25.3	0.9	16	5.0		
WET	e P	Z	12:03:06.3	73.2	26.2	0.7	10	4.9		
GEC2	e P	Z	12:03:06.0	73.2	26.6	0.6	5	4.7		
TNS	e P	Z	12:03:07.3	73.5	23.7	1.0	10	4.8		
BFO	e P	Z	12:03:16.8	75.2	23.4	0.7	7	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/02	17:30:41.4	35.430N	34.940W	33.0N	5.2	5.1		SZGRF
2003/08/02	17:30:29.7	35.039N	35.643W	10G	4.8	5.1		NEIC

Azores Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BUG	e P	Z	17:37:22.5	34.6	258.7	1.3	26	5.0		
BFO	e P	Z	17:37:24.5	34.9	264.1	2.0	71	5.2		
TNS	e P	Z	17:37:27.7	35.2	261.6	2.1	68	5.2		
STU	e P	Z	17:37:29.6	35.5	264.2	1.4	19	4.9		
UBBA	e P	Z	17:37:37.0	36.2	262.1	2.2	73	5.2		
NRDL	e P	Z	17:37:39.2	36.6	260.0	1.4	61	5.3		
CLZ	e P	Z	17:37:39.4	36.6	261.1	1.3	50	5.3		
GRFO	e P	Z	17:37:42.2	36.9	264.7	2.2	118	5.3		
	e L	Z	17:49:27.4			21.2	3352		5.1	
GRA2	e P	Z	17:37:42.0	37.0	264.9	2.4	152	5.4		
	e PP	Z	17:39:05.2							
MOX	e P	Z	17:37:45.1	37.2	263.8	2.1	61	5.1		
WERD	e P	Z	17:37:48.5	37.6	264.6	3.1	148	5.3		
WET	e P	Z	17:37:50.9	37.9	266.8	2.2	73	5.0		
CLL	e P	Z	17:37:53.1	38.3	264.1	2.1	45	4.8		
	e PP	Z	17:39:15.2							
	e S	E	17:43:53.7							
	e SS	N	17:46:40.4							
	e LR	Z	17:48:47.3							
	e L	Z	17:50:45.8			22.0	3967		5.2	
GEC2	e P	Z	17:37:55.4	38.4	267.8	2.4	68	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/02	17:53:59.6	36.425N	33.896W	33.0N	4.6			SZGRF
2003/08/02	17:53:36.3	35.274N	35.721W	10G	4.9	4.7		NEIC

Azores Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e P	Z	18:00:49.2	36.9	265.2	1.0	8	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/02	20:31:50.0	45.903N	17.077E	10.0G			3.0	SZGRF
2003/08/02	20:31:45.3	45.799N	17.383E	10G				NEIC

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
ARSA	e Pn	Z	20:32:19.0	1.9	137.9					
MOA	e Pn	Z	20:32:34.0	3.0	132.7					2.9

		e Sn	N	20:33:07.1						
	GEC2	e Pn	Z	20:32:47.7	3.9	139.3				3.0
	WET	e Pn	Z	20:32:55.5	4.5	136.0				
	WERD	e Pn	Z	20:33:12.4	5.7	142.0				
	MOX	e Pn	Z	20:33:18.4	6.2	139.4				
	CLL	e Pn	Z	20:33:18.8	6.2	150.6				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/03	03:35:29.0	42.923N	17.624E	10.0G		3.2		SZGRF
2003/08/03	03:35:20.7	42.684N	18.089E	10G	3.4			NEIC

Adriatic Sea

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GEC2	e Pn	N	03:37:03.6	6.9	152.0					
		e Sn	N	03:38:14.4							
		e L	Z	03:39:33.8			7.0	259		3.2	
	WET	e Pn	Z	03:37:10.6	7.4	148.8					
	STU	e Pn	Z	03:37:29.5	8.7	131.2					
	BFO	e Pn	Z	03:37:29.7	8.9	126.0					
		e Sn	N	03:39:01.3							
	MOX	e Pn	N	03:37:34.2	9.1	148.4					
		e Sn	N	03:39:10.3							
	TNS	e Pn	Z	03:37:47.0	10.0	135.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/03	04:10:52.6	55.767N	152.600W	33.0N	5.3			SZGRF
2003/08/03	04:10:51.7	56.219N	153.571W	33N	5.2	5.3		NEIC

South of Alaska

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	NRDL	e P	Z	04:22:06.6	70.5	350.5	1.4	58	5.5		
	RUE	e P	Z	04:22:08.6	70.8	352.6					
	CLZ	e P	Z	04:22:10.9	71.1	350.6	1.2	46	5.5		
	BUG	e P	Z	04:22:10.6	71.2	348.9	1.4	74	5.6		
	CLL	i P	+ Z	04:22:14.9	71.9	352.2	1.5	34	5.3		
		e PP	Z	04:24:54.4							
		e S	T	04:31:37.8							
		e SS	R	04:36:16.1							
		e SSS	T	04:39:33.3							
		e L	Z	04:56:19.0			22.0	1112		5.1	
	MOX	e P	Z	04:22:18.4	72.4	351.4	1.6	71	5.6		
	TNS	e P	Z	04:22:18.8	72.5	349.6	1.2	26	5.2		
	WERD	e P	Z	04:22:19.9	72.7	351.8					
	WLF	e P	Z	04:22:20.5	72.8	348.4	1.0	28	5.3		
	GRFO	e P	Z	04:22:23.2	73.3	351.2	1.1	17	5.0		

WET	e P	Z	04:22:27.6	74.0	352.2	1.4	28	5.1	
BFO	e P	Z	04:22:29.6	74.4	349.7				
GEC2	e P	Z	04:22:30.1	74.4	352.7	0.9	9	4.8	
FUR	e P	Z	04:22:32.4	74.9	351.3				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/03	11:46:50.9	15.457S	174.763W	200G	4.4			NEIC

Tonga

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e PKP	Z	12:06:00.3	143.4	8.3					
CLL	i PKP	Z	12:06:00.3	143.6	12.7	0.7	12			
BUG	e PKP	Z	12:06:01.8	144.0	3.3					
UBBA	e PKP	Z	12:06:03.1	144.4	7.9					
MOX	e PKP	Z	12:06:03.6	144.4	10.6					
TNS	e PKP	Z	12:06:05.9	145.1	5.4					
GRFO	e PKP	Z	12:06:07.1	145.4	10.2					
WET	e PKP	Z	12:06:07.8	145.7	13.2					
WLF	e PKP	Z	12:06:08.5	145.8	1.6					
GEC2	e PKP	Z	12:06:08.4	145.9	14.7					
STU	e PKP	Z	12:06:10.4	146.5	6.9					
FUR	e PKP	Z	12:06:11.5	146.9	10.7					
BFO	e PKP	Z	12:06:11.5	147.0	5.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/03	11:46:14.6	40.500S	176.000W	52	5.4			NEIC

North Island of New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	12:06:14.5	164.0	31.7	0.7	3			
	e PKPab	Z	12:07:02.9			1.1	12			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/03	17:10:22.8	17.632S	174.422W	33N	5.0			NEIC

Tonga

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e PKP	Z	17:29:59.2	145.6	8.1					
CLL	i PKPbc	Z	17:29:59.4	145.8	12.7	0.9	46			
	i		17:30:35.9							
MOX	e PKP	Z	17:30:02.3	146.6	10.5					
TNS	e PKP	Z	17:30:04.3	147.3	5.1					
GRFO	e PKP	Z	17:30:05.4	147.6	10.1					

GEC2	e PKP	Z	17:30:06.6	148.1	14.8	
BFO	e PKP	Z	17:30:09.4	149.2	5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/03	19:04: 7.9	24.752S	176.563W	50.0N				SZGRF
2003/08/03	19:04:25.1	22.587S	177.021W	167D	5.1			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPdf	Z	19:23:51.5	149.6	13.1					
	e PKPbc	Z	19:23:56.2							
CLZ	e PKPdf	Z	19:23:52.2	150.2	13.8					
CLL	i PKPdf	Z	19:23:52.3	150.2	18.9	1.2	22			
	e PKPbc	Z	19:23:58.0			1.0	193			
	e PKPab	Z	19:24:04.9			0.9	139			
	e pPKPbc	Z	19:24:44.4							
BUG	e PKPdf	Z	19:23:53.4	151.0	8.2					
MOX	e PKPdf	Z	19:23:53.6	151.1	16.7					
	e PKPbc	Z	19:23:59.8							
	e PKPab	Z	19:24:07.8							
UBBA	e PKPdf	Z	19:23:53.7	151.2	13.6					
	e PKPbc	Z	19:23:59.9							
	e PKPab	Z	19:24:08.4							
TNS	e PKPdf	Z	19:23:54.7	152.0	10.8					
	e PKPbc	Z	19:24:01.7							
	e PKPab	Z	19:24:11.9							
GRFO	e PKPdf	Z	19:23:55.3	152.1	16.4					
	e PKPbc	Z	19:24:02.6							
	e PKPab	Z	19:24:12.5							
WET	e PKPdf	Z	19:23:55.3	152.3	20.0					
	e PKPbc	Z	19:24:02.6							
	e PKPab	Z	19:24:13.3							
GEC2	e PKPdf	Z	19:23:55.3	152.4	21.8					
WLF	e PKPdf	Z	19:23:56.8	152.8	6.4					
	e PKPbc	Z	19:24:03.7							
STU	e PKPdf	Z	19:23:56.8	153.4	12.9					
FUR	e PKPdf	Z	19:23:57.1	153.6	17.4					
BFO	e PKPdf	Z	19:23:57.3	153.9	11.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/03	21:44:46.0	45.336N	10.056E	10.0G			2.9	SZGRF
2003/08/03	21:44:45.5	45.233N	10.117E	5G				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML

BFO	e Pn	Z	21:45:37.2	3.3	157.8			2.7
	e Sn	E	21:46:14.3					
WET	e Sn	N	21:46:39.8	4.3	206.7			
GEC2	e Pn	Z	21:45:50.8	4.4	215.4			3.1
	e Sn	N	21:46:40.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/04	03:08:45.9	64.581N	7.788E	33.0N				SZGRF
2003/08/04	03:08:26.3	65.912N	5.443E	10G	4.8	4.2		NEIC

Norwegian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z	03:11:40.8	13.6	351.9	0.9	20			
CLZ	e P	Z	03:11:49.1	14.3	351.8	0.7	37			
CLL	e P	Z	03:12:00.1	15.1	348.1	1.0	9			
MOX	e P	Z	03:12:05.9	15.6	350.6	1.0	8			
TNS	e P	Z	03:12:10.2	15.8	355.5					
WLF	e P	Z	03:12:16.8	16.3	359.0					
GRFO	e P	Z	03:12:21.5	16.5	351.7	1.0	19			
WET	e P	Z	03:12:29.9	17.2	349.7					
GEC2	e P	Z	03:12:35.5	17.6	348.8					
BFO	e P	Z	03:12:37.4	17.6	356.1					
FUR	e P	Z	03:12:40.9	18.0	352.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/04	03:28:25.9	29.042N	58.992E	33.0N	5.2	4.7		SZGRF
2003/08/04	03:28:19.4	29.018N	59.793E	33N	5.4	5.3		NEIC

Southern Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	03:35:54.6	40.2	102.3	1.1	94	5.3		
	e PP	Z	03:37:34.3							
	e PcP	Z	03:37:57.6							
WET	e P	Z	03:35:58.9	40.7	101.9	1.5	44	4.9		
	e PP	Z	03:37:39.4							
RUE	e P	Z	03:36:01.9	41.0	106.5	1.1	93	5.4		
	e PP	Z	03:37:44.5							
	e PcP	Z	03:38:01.0							
CLL	i P	+ Z	03:36:03.6	41.2	104.4	1.0	146	5.7		
	e		03:36:17.5							
	e PP	Z	03:37:47.2							
	e PcP	Z	03:38:00.0							
	e S	E	03:42:18.4							
	e SS	N	03:45:24.5							
	e LR	Z	03:49:23.0							

	e L	Z	03:57:32.4			18.0	1998		5.0
WERD	e PcP	Z	03:38:01.4	41.4	102.8				
FUR	e P	Z	03:36:05.9	41.6	99.4				
	e PcP	Z	03:38:02.0						
MOX	e P	Z	03:36:08.9	41.9	102.4	1.1	15	4.6	
GRFO	e P	Z	03:36:09.6	41.9	101.0	1.9	122	5.3	
	e PcP	Z	03:38:03.9						
	e S	N	03:42:28.3						
	e L	Z	03:57:12.7			20.7	1078		4.7
CLZ	e P	Z	03:36:17.8	42.9	102.5	1.1	81	5.4	
	e PcP	Z	03:38:06.6						
UBBA	e P	Z	03:36:17.2	42.9	101.1	2.0	64	5.0	
	e PcP	Z	03:38:07.4						
NRDL	e P	Z	03:36:20.5	43.2	103.0	1.1	74	5.3	
BFO	e P	Z	03:36:22.0	43.6	97.0	1.3	11	4.4	
	e PcP	Z	03:38:09.4						
TNS	e P	Z	03:36:24.6	43.8	99.1	1.5	78	5.2	
	e PcP	Z	03:38:09.9						
BUG	e P	Z	03:36:32.1	44.7	99.3	1.0	53	5.2	
	e PcP	Z	03:38:13.1						
WLF	e P	Z	03:36:35.4	45.1	96.6	1.1	46	5.3	
	e PcP	Z	03:38:15.0						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/04	04:09:28.8	20.273S	177.727W	450G	4.8			NEIC

Fiji region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	04:28:19.5	147.9	19.2					
	i PKPbc	- Z	04:28:22.3			0.6	20			
	i PKPab	Z	04:28:26.3			0.7	10			
	e pPKPbc	Z	04:30:24.3							
GRA2	e PKP	Z	04:28:26.9	149.7	17.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/04	04:37:20.0	60.555S	43.492W	10G	5.9	7.4		NEIC

Scotia Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pdiff	Z	04:52:21.8	116.6	205.6					
	e PKPdf	Z	04:56:05.6							
	e PP	Z	04:57:07.3							
WLF	e Pdiff	Z	04:52:25.5	117.2	204.9					
STU	e Pdiff	Z	04:52:24.9	117.3	206.1					
	e PKPdf	Z	04:56:06.8							

	e	PP	Z	04:57:12.8					
FUR	e	Pdiff	Z	04:52:24.7	117.4	206.9			
TNS	e	Pdiff	Z	04:52:30.3	118.4	206.1			
GRFO	e	Pdiff	Z	04:52:37.5	118.7	207.2			
	e	PKPdf	Z	04:56:12.3					
	e	PP	Z	04:57:25.9					
	e	Sdiff	E	05:05:14.5					
	e	PS	Z	05:07:12.5					
	e	SS	E	05:13:41.3					
	e	SSS	N	05:17:54.8					
	e	L	Z	05:41:44.2			21.7	111917	7.5
GEC2	e	Pdiff	Z	04:52:30.4	118.7	208.1			
WET	e	Pdiff	Z	04:52:31.3	118.7	207.8			
	e	PP	Z	04:57:22.1					
BUG	e	Pdiff	Z	04:52:33.9	119.2	205.8			
	e	PKPdf	Z	04:56:10.7					
	e	PP	Z	04:57:27.0					
UBBA	e	Pdiff	Z	04:52:34.6	119.4	207.0			
MOX	e	Pdiff	Z	04:52:36.1	119.7	207.6			
	e	PKPdf	Z	04:56:10.6					
	e	PP	Z	04:57:30.8					
CLZ	e	Pdiff	Z	04:52:39.8	120.4	207.4			
CLL	e	Pdiff	Z	04:52:35.9	120.7	208.5			
	i	PKPdf	Z	04:56:12.4			0.9	33	
	e	PP	Z	04:57:51.7					
	e	PKSdf	N	04:59:38.1					
	e	PPP	Z	05:00:20.6					
	e	SKSdf	R	05:03:26.6					
	e	Sdiff	T	05:05:32.6					
	e	PKKP	Z	05:06:30.7					
	e	PS	N	05:07:52.2					
	e	PPS	N	05:08:54.0					
	e	SS	T	05:14:17.9					
	e	SSS	R	05:18:40.3					
	e	LQ	T	05:27:30.3					
	e	LR	Z	05:29:08.0					
	e	L	Z	05:42:53.2			20.0	122957	7.5
NRDL	e	Pdiff	Z	04:52:41.9	120.9	207.5			
HLG	e	Pdiff	Z	04:52:45.4	121.8	206.9			
RUE	e	Pdiff	Z	04:52:46.0	121.9	209.2			
RGN	e	Pdiff	Z	04:52:53.7	123.6	209.6			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/04	11:31:44.6	47.209N	149.649E	33.0N	5.2			SZGRF
2003/08/04	11:31:28.4	44.607N	149.577E	33N	4.7			NEIC

Northwest of Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z	11:43:20.1	76.8	28.4	1.1	16	5.0		
CLL	e P	Z	11:43:20.6	77.0	30.1	1.1	60	5.5		
BRG	e P	Z	11:43:21.3	77.1	30.7	1.2	16	4.9		
CLZ	e P	Z	11:43:23.4	77.3	28.5	1.4	50	5.4		
WERD	e P	Z	11:43:26.7	78.0	29.6	0.8	11	5.0		
MOX	e P	Z	11:43:26.7	78.0	29.2	1.2	24	5.2		
BUG	e P	Z	11:43:29.7	78.6	26.4					
GEC2	e P	Z	11:43:31.7	78.9	30.3	0.8	11	5.0		
WET	e P	Z	11:43:32.3	78.9	29.8	1.0	35	5.4		
GRA1	e P	Z	11:43:32.6	79.0	28.8	1.0	46	5.6		
TNS	e P	Z	11:43:34.1	79.3	27.0	1.3	22	5.1		
BFO	e P	Z	11:43:43.3	81.1	26.8	1.0	14	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/04	11:57:19.8	36.855N	138.660E	33.0N	5.4			SZGRF
2003/08/04	11:57:16.1	36.517N	140.423E	80*	4.6			NEIC

Eastern Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	12:09:35.8	82.8	38.9	0.9	27	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/04	20:54:31.7	6.016N	126.215E	33N	5.2	4.7		NEIC

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z	21:08:21.1	101.2	66.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/04	21:52:29.8	21.914S	169.538E	33N	5.1			NEIC

SE of the Loyalty Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPbc	Z	22:12:05.5	145.4	42.4					
CLL	e PKPbc	Z	22:12:05.5	145.4	40.6					
CLL	i PKPbc	+ Z	22:12:05.8	145.4	40.6	0.9	32			
	e pPKPbc	Z	22:12:13.3							
NRDL	e PKPbc	Z	22:12:06.2	145.6	35.2					
CLZ	e PKPbc	Z	22:12:07.8	146.0	36.2					
WERD	e PKPbc	Z	22:12:08.8	146.4	40.4					
GEC2	e PKPbc	Z	22:12:10.5	146.9	44.1					
WET	e PKPbc	Z	22:12:11.1	147.1	42.6					
GRA1	e PKPbc	Z	22:12:11.8	147.4	39.5					

BUG	e PKPbc	Z	22:12:12.6	147.4	31.7
TNS	e PKPbc	Z	22:12:13.4	148.0	34.6
STU	e PKPbc	Z	22:12:15.9	148.9	37.2
WLF	e PKPbc	Z	22:12:17.3	149.3	31.3
BFO	e PKPbc	Z	22:12:17.2	149.6	36.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/05	04:45:38.6	20.893S	178.947W	610D	5.1			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPdf	Z	05:04:12.9	147.6	15.9					
	e PKP	Z	05:04:16.9							
	e PKPab	Z	05:04:21.3							
CLL	e PKPdf	Z	05:04:13.8	148.2	21.5	1.1	22			
	i PKPbc	- Z	05:04:18.2			1.1	185			
	e PKPab	Z	05:04:23.8			1.0	74			
	e pPKPbc	Z	05:06:38.4							
	e sPKPbc	Z	05:07:38.4							
CLZ	e PKPdf	Z	05:04:13.9	148.2	16.7					
	e PKP	Z	05:04:18.6							
	e PKPab	Z	05:04:24.2							
BRG	e PKPdf	Z	05:04:13.8	148.4	23.4					
	e PKP	Z	05:04:19.0							
	e PKPab	Z	05:04:24.6							
BUG	e PKPdf	Z	05:04:14.9	149.1	11.4					
	e PKP	Z	05:04:20.2							
	e PKPab	Z	05:04:27.3							
MOX	e PKPdf	Z	05:04:15.6	149.1	19.5					
	e PKP	Z	05:04:20.6							
	e PKPab	Z	05:04:27.7							
WERD	e PKPdf	Z	05:04:14.9	149.1	20.8					
	e PKP	Z	05:04:20.9							
	e PKPab	Z	05:04:27.5							
UBBA	e PKPdf	Z	05:04:15.1	149.3	16.5					
	e PKP	Z	05:04:20.6							
GRFO	e PKPdf	Z	05:04:17.3	150.1	19.3					
	e PKP	Z	05:04:22.5							
	e PKPab	Z	05:04:32.3							
TNS	e PKPdf	Z	05:04:16.7	150.1	14.0					
	e PKP	Z	05:04:22.9							
	e PKPab	Z	05:04:31.7							
WET	e PKPdf	Z	05:04:16.8	150.2	22.7					
	e PKP	Z	05:04:23.3							
	e PKPab	Z	05:04:32.9							
GEC2	e PKPdf	Z	05:04:16.9	150.3	24.4					
	e PKP	Z	05:04:22.9							

	e PKPab	Z	05:04:32.7				
WLF	e PKPdf	Z	05:04:17.7	150.9	9.8		
	e PKP	Z	05:04:24.6				
	e PKPab	Z	05:04:35.4				
STU	e PKPdf	Z	05:04:18.8	151.4	16.0		
	e PKP	Z	05:04:25.2				
	e PKPab	Z	05:04:36.9				
BFO	e PKPdf	Z	05:04:19.1	151.9	14.6		
	e PKP	Z	05:04:26.9				
	e PKPab	Z	05:04:39.0				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/05	11:07:55.8	21.972N	71.231E	33.0N	5.6			SZGRF
2003/08/05	11:08:02.0	23.672N	70.535E	10G	5.0	4.3		NEIC

Southern India

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	11:17:05.2	50.8	98.4					
BRG	e P	Z	11:17:07.3	51.0	100.2					
WET	e P	Z	11:17:08.9	51.4	97.9					
CLL	e P	Z	11:17:11.6	51.6	99.7					
WERD	e P	Z	11:17:13.7	51.9	98.5					
MOX	e P	Z	11:17:17.3	52.4	98.1					
GRA1	e P	Z	11:17:18.3	52.5	97.0	0.9	55	5.6		
GRFO	e P	Z	11:17:18.5	52.5	97.0					
CLZ	e P	Z	11:17:24.4	53.3	97.9					
UBBA	e P	Z	11:17:26.5	53.4	96.8					
NRDL	e P	Z	11:17:25.9	53.6	98.2					
BFO	e P	Z	11:17:29.3	54.3	93.7					
TNS	e P	Z	11:17:31.8	54.3	95.1					
BUG	e P	Z	11:17:37.5	55.2	95.0					
WLF	e P	Z	11:17:42.0	55.8	92.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/05	16:54:08.9	20.401S	178.331W	562?	4.4			NEIC

Fiji region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKP	Z	17:12:49.2	146.6	20.9					
NRDL	e PKP	Z	17:12:51.1	147.2	14.7					
CLZ	e PKP	Z	17:12:52.7	147.8	15.5					
CLL	e PKPdf	Z	17:12:48.4	147.8	20.2	1.5	8			
	i PKPbc	Z	17:12:52.8			0.8	32			
	i PKPab	Z	17:12:56.9			0.9	12			
BRG	e PKP	Z	17:12:53.0	148.0	22.1					

BUG	e PKP	Z	17:12:54.5	148.7	10.1
MOX	e PKP	Z	17:12:54.9	148.8	18.2
WERD	e PKP	Z	17:12:55.0	148.8	19.5
UBBA	e PKP	Z	17:12:55.0	148.9	15.2
TNS	e PKP	Z	17:12:57.3	149.7	12.7
WET	e PKP	Z	17:12:57.4	149.9	21.3
GEC2	e PKP	Z	17:12:57.5	150.0	23.0
WLF	e PKP	Z	17:12:59.6	150.5	8.6
BFO	e PKP	Z	17:13:01.3	151.6	13.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/05	18:57: 4.1	0.610N	30.450E	33.0N	5.3			SZGRF
2003/08/05	18:56:50.7	0.509S	29.434E	10G	5.1	4.8		NEIC

Uganda

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	19:05:57.0	51.2	159.6	0.9	32	5.3		
WET	e P	Z	19:06:00.2	51.7	158.7	1.0	25	5.1		
BFO	e P	Z	19:06:04.1	52.2	152.9	1.2	51	5.3		
STU	e P	Z	19:06:06.7	52.3	154.1	0.9	29	5.2		
GRFO	e P	Z	19:06:07.2	52.6	156.8	1.2	62	5.4		
GRA1	e P	Z	19:06:07.2	52.6	156.8	1.3	80	5.5		
WERD	e P	Z	19:06:11.4	53.0	158.4	1.0	21	5.0		
BRG	e P	Z	19:06:10.2	53.0	160.5	1.2	24	5.0		
MOX	e P	Z	19:06:12.8	53.4	157.6	1.1	22	5.0		
CLL	i P	Z	19:06:13.2	53.7	159.4	0.9	22	5.1		
	e PP	Z	19:08:18.3							
	e S	T	19:13:46.4							
	e SSS	R	19:19:21.5							
	e LR	Z	19:24:17.2							
	e L	Z	19:30:04.2			22.0	448			
TNS	e P	Z	19:06:17.1	53.8	153.7	1.0	99	5.7		
UBBA	e P	Z	19:06:17.8	53.9	155.7	1.1	38	5.2		
WLF	e P	Z	19:06:18.3	54.0	150.8	0.8	45	5.4		
RUE	e P	Z	19:06:21.5	54.6	160.7	1.0	64	5.6		
CLZ	e P	Z	19:06:23.4	54.8	156.4	1.1	31	5.2		
BUG	e P	Z	19:06:27.1	55.2	152.7	0.9	90	5.8		
NRDL	e P	Z	19:06:28.9	55.4	156.3	1.0	124	5.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/05								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	19:37:02.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/05								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	22:00:55.4							
WLF	e P	Z	22:00:47.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/06	12:15:34.1	45.491N	147.267E	33.0N	5.5			SZGRF
2003/08/06	12:15:22.6	43.381N	147.274E	51D	5.3			NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	12:27:08.2	76.1	32.9	0.9	90	5.8		
NRDL	e P	Z	12:27:14.7	77.3	30.4	0.9	27	5.4		
CLL	e P	Z	12:27:14.7	77.4	32.2	0.9	94	5.9		
BRG	e P	Z	12:27:15.2	77.4	32.8	1.3	41	5.4		
CLZ	e P	Z	12:27:17.7	77.7	30.5	1.0	86	5.8		
WERD	e P	Z	12:27:20.5	78.3	31.7	0.9	20	5.3		
MOX	e P	Z	12:27:20.7	78.4	31.2	1.2	40	5.4		
UBBA	e P	Z	12:27:22.8	78.7	30.2	1.8	46	5.3		
BUG	e P	Z	12:27:24.3	79.0	28.4	0.9	55	5.7		
GEC2	e P	Z	12:27:25.3	79.2	32.4	0.9	15	5.1		
WET	i P	Z	12:27:25.9	79.2	31.9	1.1	47	5.5		
GRA1	e P	Z	12:27:26.5	79.3	30.9	0.9	84	5.9		
TNS	e P	Z	12:27:28.4	79.8	29.1	1.0	31	5.4		
FUR	e P	Z	12:27:33.2	80.6	30.8	1.0	70	5.6		
STU	e P	Z	12:27:33.8	80.8	29.5	0.8	48	5.6		
BFO	e P	Z	12:27:37.3	81.4	28.9	1.0	27	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/06	14:57:51.5	15.504S	173.286W	33N	5.1	4.5		NEIC

Tonga

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKP	Z	15:17:24.3	143.8	10.3					
MOX	e PKP	Z	15:17:26.5	144.6	8.2					
WERD	e PKP	Z	15:17:26.5	144.8	9.4					
TNS	e PKP	Z	15:17:27.9	145.3	2.9					
GRA1	e PKP	Z	15:17:30.0	145.6	7.7					
WLF	e PKP	Z	15:17:30.3	145.8	359.0					
WET	e PKP	Z	15:17:29.4	146.0	10.7					
GEC2	e PKP	Z	15:17:31.2	146.2	12.2					

FUR	e PKP	Z	15:17:33.7	147.1	8.1
BFO	e PKP	Z	15:17:33.7	147.1	2.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/06	17:18: 0.9	33.518N	34.228W	33.0N		4.5		SZGRF
2003/08/06	17:17:53.9	35.027N	35.572W	10G	4.4			NEIC

Northern Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	17:24:38.8	33.6	260.2					
	e L	Z	17:35:18.0			21.5	1308		4.6	
BUG	e P	Z	17:24:46.4	34.6	258.7					
	e L	Z	17:36:03.4			21.4	1306		4.6	
BFO	e P	Z	17:24:49.7	34.8	264.1					
	e L	Z	17:36:11.9			19.7	528		4.3	
TNS	e P	Z	17:24:52.6	35.1	261.5					
	e L	Z	17:36:06.6			21.8	1358		4.7	
STU	e P	Z	17:24:55.1	35.4	264.2					
	e L	Z	17:36:21.9			18.9	642		4.4	
HLG	e P	Z	17:24:55.3	35.6	255.5					
	e L	Z	17:36:51.3			19.8	1101		4.6	
UBBA	e P	Z	17:25:01.3	36.2	262.0					
	e L	Z	17:37:34.7			19.8	832		4.5	
NRDL	e P	Z	17:25:02.6	36.5	259.9					
	e L	Z	17:37:01.2			21.9	1230		4.6	
CLZ	e P	Z	17:25:05.4	36.6	261.0					
	e L	Z	17:37:14.7			19.8	1581		4.8	
FUR	e P	Z	17:25:05.9	36.8	266.7					
	e L	Z	17:37:01.1			21.7	400		4.2	
GRA1	e P	Z	17:25:07.0	36.8	264.6					
	e PP	Z	17:26:29.7							
	e S	Z	17:30:51.3							
	e L	Z	17:38:08.1			20.0	436		4.2	
MOX	e P	Z	17:25:08.9	37.2	263.7					
	e L	Z	17:37:18.5			22.0	1410		4.7	
WET	e P	Z	17:25:15.3	37.9	266.7					
	e L	Z	17:37:34.1			21.3	534		4.3	
CLL	e P	Z	17:25:17.2	38.1	264.0					
	e L	Z	17:38:11.5			21.6	1129		4.6	
GEC2	e P	Z	17:25:19.3	38.4	267.7					
	e L	Z	17:38:01.2			21.8	479		4.3	
BRG	e P	Z	17:25:22.8	38.7	265.4					
	e L	Z	17:38:48.8			19.5	804		4.6	
RUE	e P	Z	17:25:21.9	38.7	263.3					
	e L	Z	17:38:07.8			21.9	1013		4.6	
RGN	e P	Z	17:25:21.7	38.8	260.3					
	e L	Z	17:39:13.8			19.8	1492		4.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/06	20:45:34.7	15.753S	172.469W	33N	4.9			NEIC

Samoa Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	21:05:11.5	145.9	6.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/07	01:00:44.3	16.359S	178.239W	500G	4.1			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	01:19:29.9	145.8	16.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/07	03:57:18.1	29.075N	126.699E	33.0N	5.1			SZGRF
2003/08/07	03:57:01.9	28.249N	130.140E	33N	4.7			NEIC

Northwest of Ryukyu Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:09:38.8	85.1	50.7	0.9	11	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/07	04:07:33.9	17.734S	172.980W	33N	5.1	5.1		NEIC

Samoa Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	04:27:19.2	147.9	7.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/08	00:51:53.8	40.513N	137.596E	33.0N	4.4			SZGRF
2003/08/08	00:51:34.9	38.755N	141.102E	33N	4.6			NEIC

Eastern Sea of Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:03:50.7	81.1	37.3	0.9	3	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/08	09:59:28.7	24.917N	95.480E	33.0N	5.5			SZGRF
2003/08/08	09:59:23.0	26.633N	96.953E	12D	5.0	4.2		NEIC

Myanmar

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	10:10:23.0	67.4	75.0	1.7	56	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/08	14:56:31.3	12.083S	69.948W	33.0N	5.1			SZGRF
2003/08/08	14:56:20.6	13.698S	71.727W	44*	5.0	4.2		NEIC

Central Peru

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	15:09:44.4	95.9	255.8	1.6	12	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/08	15:38:20.4	10.419S	71.183W	33.0N	4.9			SZGRF
2003/08/08	15:38:04.1	13.837S	71.847W	33N	4.7			NEIC

Peru-Brazil border region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	15:51:31.1	96.1	255.8	1.5	8	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/08	15:53:33.4	12.267S	167.083E	250G	4.8			NEIC

Santa Cruz Islands

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	16:12:29.8	137.6	36.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/08	16:56:59.3	24.098S	179.801E	500G	4.6			NEIC

South of Fiji Islands

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	i PKPbc	+ Z	17:15:55.6	151.0	25.5	0.8	41			
		i PKPab	Z	17:16:05.2			0.7	8			
		e pPKPbc	Z	17:18:00.7							
	GRA1	e PKPbc	Z	17:15:59.8	152.9	23.4					

e PKPab Z 17:16:14.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/08	17:44:10.6	40.726N	74.541E	33.0N	4.1			SZGRF

Kyrgyzstan-Xinjiang border region

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z 17:52:16.3	44.1	76.5	0.9	3	4.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/09								

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z 01:13:10.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/09								

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z 04:45:18.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/09	10:25:24.0	54.703N	152.612W	33.0G	4.6			SZGRF
2003/08/09	10:25:33.0	55.933N	156.667W	25	4.3			NEIC

South of Alaska

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z 10:37:06.0	73.9	353.0	1.6	9	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/09	16:14:53.8	40.910N	28.610E	33.0G				SZGRF

Turkey

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z 16:18:28.9	15.0	119.2	1.2	4			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/09	16:26:23.8	52.640N	171.120W	33.0N	5.2			SZGRF

2003/08/09 16:26:15.6 51.683N 171.282W 33N 5.0 NEIC
Fox Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	16:38:02.4	75.8	3.2	1.6	62	5.4		
NRDL	e P	Z	16:38:02.2	75.8	0.9	1.9	38	5.1		
IBBN	e P	Z	16:38:02.7	76.0	359.4	1.6	62	5.4		
BUG	e P	Z	16:38:07.2	76.9	359.1	1.3	22	5.1		
CLL	e P	Z	16:38:07.6	76.9	2.7	1.2	20	5.1		
BRG	e P	Z	16:38:10.0	77.3	3.3	1.7	52	5.4		
UBBA	e P	Z	16:38:11.0	77.5	0.8	1.7	31	5.2		
MOX	e P	Z	16:38:11.9	77.6	1.8	1.8	48	5.3		
WERD	e P	Z	16:38:13.1	77.8	2.3	1.5	24	5.1		
TNS	e P	Z	16:38:14.5	78.1	359.8	1.4	23	5.1		
GRA1	e P	Z	16:38:17.8	78.6	1.6	1.2	58	5.6		
WLF	e P	Z	16:38:17.8	78.6	358.4	1.8	53	5.4		
WET	e P	Z	16:38:20.3	79.1	2.6	1.4	24	5.0		
GEC2	e P	Z	16:38:21.5	79.4	3.1	1.4	30	5.1		
STU	e P	Z	16:38:23.2	79.5	0.3	1.8	70	5.4		
BFO	e P	Z	16:38:24.8	80.0	359.8	1.7	50	5.3		
FUR	e P	Z	16:38:26.5	80.1	1.6	1.2	39	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/09								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	17:31:18.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/09	22:01:39.4	36.398N	155.023E	33.0N	4.7			SZGRF

North Pacific Ocean

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	22:14:16.8	86.2	29.8					
IBBN	e P	Z	22:14:20.0	86.8	25.8					
MOX	e P	Z	22:14:22.8	87.2	28.7					
WET	e P	Z	22:14:24.7	88.1	29.6					
GRA1	e P	Z	22:14:27.2	88.1	28.4	2.1	10	4.7		
	e pP	Z	22:14:36.9							
GRFO	e P	Z	22:14:27.0	88.1	28.4					
WLF	e P	Z	22:14:33.5	89.6	24.6					
BFO	e P	Z	22:14:36.3	90.2	26.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/10								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	11:24:45.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/10								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	13:43:38.1							
	e Sn	N	13:44:28.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/10	18:36:21.0	29.526N	130.937E	33.0N	5.4	4.9		SZGRF

Ryukyu Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	18:48:50.7	84.4	49.4	1.6	37	5.4		
	e L	Z	19:30:15.4			20.0	469		4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/10								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	23:48:44.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/11								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKP	Z	00:12:01.2							
BRG	e PKP	Z	00:11:55.4							
BUG	e PKP	Z	00:12:05.8							
CLL	e PKP	Z	00:11:57.2							
GEC2	e PKP	Z	00:11:53.2							
GRA1	e PKP	Z	00:11:58.7							
MOX	e PKP	Z	00:11:58.8							
NRDL	e PKP	Z	00:12:03.0							
STU	e PKP	Z	00:12:00.6							
TNS	e PKP	Z	00:12:03.5							

UBBA	e	PKP	Z	00:12:00.9
WERD	e	PKP	Z	00:11:57.7
WET	e	PKP	Z	00:11:54.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/11								

Sta		Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e	PKPdf	Z	00:14:40.0							
BRG	e	PKPdf	Z	00:14:31.8							
BUG	e	PKPdf	Z	00:14:37.7							
CLL	e	PKPdf	Z	00:14:32.1							
FUR	e	PKPdf	Z	00:14:37.5							
GEC2	e	PKPdf	Z	00:14:34.2							
GRA1	e	PKPdf	Z	00:14:36.0							
MOX	e	PKPdf	Z	00:14:34.4							
NRDL	e	PKPdf	Z	00:14:34.1							
STU	e	PKPdf	Z	00:14:39.0							
TNS	e	PKPdf	Z	00:14:38.2							
UBBA	e	PKPdf	Z	00:14:35.9							
WERD	e	PKPdf	Z	00:14:34.0							
WET	e	PKPdf	Z	00:14:34.9							
WLF	e	PKPdf	Z	00:14:41.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/11	00:19:12.3	1.111N	128.163E	33N	5.7	5.6		NEIC

Halmahera, Indonesia

Sta		Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i	Pdiff	Z	00:33:15.8	104.2	70.1	1.2	6			
	e	PP	Z	00:37:56.0							
	e	PPP	Z	00:39:45.9							
	e	SKSac	R	00:43:44.2							
	e	SKKSac	R	00:44:27.3							
	e	Sdiff	T	00:45:10.1							
	e	PS	Z	00:46:53.0							
	e	PPS	R	00:47:54.3							
	e	SS	T	00:52:32.5							
	e	SSS	T	00:56:16.9							
	e	LQ	T	01:02:14.3							
	e	LR	R	01:08:57.0							
	e	L	Z	01:24:00.6			22.0	4048		5.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/11	06:01:03.7	17.599S	173.151W	33N	4.8			NEIC

Tonga

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKP	+ Z	06:20:42.5	145.9	10.5	0.9	24			
	e		06:20:52.4							
	e L	Z	07:29:43.5			18.0	269		5.1	
BRG	e PKP	Z	06:20:43.5	146.2	12.2					
GRA1	e PKP	Z	06:20:46.2	147.7	7.8					
BFO	e PKP	Z	06:20:51.6	149.2	2.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/11	11:39:03.5	18.653S	175.451W	227D	4.8			NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	11:58:17.5	145.9	9.4					
CLL	e PKPbc	Z	11:58:20.0	146.7	14.7					
	e pPKPbc	Z	11:59:21.0							
BUG	e PKPbc	Z	11:58:21.3	147.1	4.8					
MOX	e PKPbc	Z	11:58:22.7	147.5	12.5					
WERD	e PKPbc	Z	11:58:22.7	147.6	13.8					
TNS	e PKPbc	Z	11:58:24.9	148.3	7.0					
GRA1	e PKPbc	Z	11:58:25.6	148.5	12.2					
GEC2	e PKPbc	Z	11:58:26.5	148.9	17.0					
BFO	e PKPbc	Z	11:58:29.2	150.2	7.2					
	e pPKPbc	Z	11:59:31.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/11	13:40:19.5	56.966S	147.439E	10G				NEIC

West of Macquarie Island

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e PKPdf	Z	14:00:08.4	151.6	124.2					
GRA1	e PKPdf	Z	14:00:11.3	153.4	122.7					
	e PKPbc	Z	14:00:19.0							
	e PKPab	Z	14:00:31.7							
	e SS	N	14:23:42.2							
	e L	Z	15:14:14.5			21.7	1492		5.8	
BFO	e PKPdf	Z	14:00:12.5	154.2	125.0					
CLZ	e PKPdf	Z	14:00:13.6	154.9	118.8					
TNS	e PKPdf	Z	14:00:14.0	155.2	121.6					
CLL	e PKPbc	Z	14:00:19.6	153.1	120.1	1.5	39			
	e PKPab	Z	14:00:32.6							

	e		14:00:46.8					
	e PP	Z	14:04:03.0					
	e SS	N	14:23:43.7					
	e LR	Z	14:54:18.8					
	e L	Z	15:11:19.9			22.0	1350	5.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/11	20:12: 9.3	38.109N	44.368E	33.0N	5.3			SZGRF
2003/08/11	20:12:08.5	38.775N	44.921E	33N	4.9	3.8		NEIC

Turkey-Iran border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:17:41.9	26.2	101.7	2.3	194	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/11	21:22:29.4	11.632N	93.797E	102.6	5.6			SZGRF
2003/08/11	21:22:30.1	12.119N	93.558E	100D	5.6			NEIC

Andaman Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	21:33:57.1	74.1	90.3	1.1	68	5.6		
RUE	e P	Z	21:33:57.9	74.2	90.6	1.3	178	5.9		
GEC2	e P	Z	21:33:58.5	74.3	89.5	1.0	70	5.6		
CLL	i P	Z	21:34:00.7	74.7	89.6	1.2	53	5.4		
	e pP	Z	21:34:25.7							
	e sP	Z	21:34:37.2							
	e PP	Z	21:36:47.7							
	e pPP	Z	21:37:08.5							
	e sPP	Z	21:37:20.8							
	e PPP	Z	21:38:33.9							
	e pPPP	Z	21:38:54.5							
	e S	R	21:43:27.8							
	e sS	N	21:44:12.9							
	e sSS	E	21:48:54.7							
	e SSS	R	21:51:48.1							
	e LR	Z	21:58:10.0							
	e L	Z	22:11:48.4			20.0	1922	5.4		
WET	e P	Z	21:34:01.5	74.8	89.0	1.1	46	5.4		
WERD	e P	Z	21:34:03.4	75.1	88.9	1.1	45	5.5		
MOX	e P	Z	21:34:06.0	75.6	88.4	1.0	37	5.5		
GRA1	e P	Z	21:34:08.0	75.9	87.8	1.5	129	5.8		
	e pP	Z	21:34:33.3							
	e sP	Z	21:34:46.9							
	e L	Z	22:12:58.1			20.9	1294			
FUR	e P	Z	21:34:08.2	75.9	87.5	0.9	51	5.7		

NRDL	e	P		Z	21:34:10.5	76.4	87.7	1.5	132	5.8
UBBA	e	P		Z	21:34:11.8	76.6	87.2			
STU	e	P		Z	21:34:16.0	77.2	86.1			
TNS	e	P		Z	21:34:17.4	77.6	85.9	1.0	28	5.3
BFO	e	P		Z	21:34:18.4	77.8	85.4	1.4	41	5.4
BUG	e	P		Z	21:34:20.5	78.3	85.2	1.2	83	5.7
WLF	e	P		Z	21:34:26.3	79.1	84.0			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/12	11:45:21.0	52.630N	158.290E	38.5	5.5	5.0		SZGRF
2003/08/12	11:45:10.6	51.202N	158.970E	36D	5.0	4.4		NEIC

Near east coast of Kamchatka Peninsula, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	11:56:36.1	72.3	22.1	1.1	113	5.9		
NRDL	e P	Z	11:56:40.6	73.0	19.8	1.1	32	5.4		
CLL	i P	+ Z	11:56:43.0	73.5	21.5	1.0	86	5.7		
	e pP	Z	11:56:53.7							
	e S	N	12:06:13.0							
	e PS	N	12:06:51.0							
	e LR	Z	12:22:58.9							
	e L	Z	12:33:33.9			18.0	642		5.0	
BRG	e P	Z	11:56:44.2	73.7	22.0	1.1	36	5.4		
MOX	e P	Z	11:56:49.0	74.5	20.5	1.1	40	5.5		
WERD	e P	Z	11:56:49.2	74.5	20.9	1.1	47	5.5		
BUG	e P	Z	11:56:49.9	74.6	17.9	1.5	56	5.5		
UBBA	e P	Z	11:56:49.8	74.6	19.6	1.6	61	5.4		
GRA1	e P	Z	11:56:55.2	75.4	20.2	1.1	95	5.7		
	e pP	Z	11:57:06.2							
	e L	Z	12:34:42.2			18.5	681		5.0	
TNS	e P	Z	11:56:55.3	75.5	18.6	0.8	22	5.3		
WET	e P	Z	11:56:55.8	75.6	21.2	1.0	63	5.6		
GEC2	e P	Z	11:56:55.8	75.6	21.6	0.9	30	5.3		
BFO	e P	Z	11:57:05.4	77.3	18.4	1.1	21	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/13	01:43:18.9	17.774S	172.917W	33N	4.9	4.6		NEIC

Tonga Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKP	Z	02:02:54.9	145.2	5.1					
CLL	i PKPbc	+ Z	02:02:58.1	146.1	10.2	1.1	74			
	e SSS	E	02:30:39.8							
	e L	Z	03:14:45.6			18.0	186		4.9	
BUG	e PKP	Z	02:02:58.4	146.3	0.3					

BRG	e PKP	Z	02:02:59.1	146.5	11.9
UBBA	e PKP	Z	02:03:00.8	146.9	5.1
MOX	e PKP	Z	02:03:00.3	146.9	7.9
WERD	e PKP	Z	02:03:01.2	147.1	9.2
TNS	e PKP	Z	02:03:02.1	147.5	2.4
GRA1	e PKP	Z	02:03:04.0	147.9	7.4
WLF	e PKP	Z	02:03:04.4	148.1	358.3
WET	e PKP	Z	02:03:03.8	148.3	10.5
GEC2	e PKP	Z	02:03:04.5	148.5	12.1
FUR	e PKP	Z	02:03:06.6	149.4	7.9
BFO	e PKP	Z	02:03:07.3	149.4	2.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/13	08:29:30.9	10.239N	79.634W	33.0N	5.2			SZGRF
2003/08/13	08:29:26.6	9.322N	79.955W	51	5.2	4.6		NEIC

North of Panama

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	08:41:52.0	83.7	276.9	0.8	13	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/13	22:58:33.8	52.442N	166.372W	33.0N	5.0			SZGRF
2003/08/13	22:58:50.2	54.458N	165.736W	100G	4.1			NEIC

Fox Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	23:10:28.5	75.8	358.2	1.1	13	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/14	02:10:57.4	8.061N	41.559W	29.6	4.4			SZGRF
2003/08/14	02:11:02.1	8.846N	40.074W	10G	4.5			NEIC

Central Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	02:21:04.1	58.9	244.3	0.8	3	4.4		
	e pP	Z	02:21:12.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/14	05:14:54.6	39.026N	21.058E	10.0G		5.7		SZGRF
2003/08/14	05:14:55.1	39.193N	20.741E	10G	5.7	6.1		NEIC

Greece

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
ARSA	e Pn	Z	05:17:05.7	8.9	152.9					
KBA	e Pn	Z	05:17:14.8	9.5	143.0					
	e Sn	N	05:19:00.9							
MOA	e Pn	Z	05:17:18.9	9.8	149.2					
WTTA	e Pn	Z	05:17:26.6	10.4	137.4					
FUR	e Pn	Z	05:17:37.6	11.3	139.3					
DAVA	e Pn	Z	05:17:38.6	11.3	131.8					
	e Sn	N	05:19:41.3							
WET	e Pn	Z	05:17:39.2	11.4	147.6					
GRFO	e Pn	Z	05:17:52.9	12.5	143.6					
GRA1	e Pn	Z	05:17:52.9	12.5	143.6					
	e L	Z	05:23:55.2			20.6	44621		5.5	
STU	e Pn	Z	05:17:55.9	12.7	134.9					
MOX	e Pn	Z	05:18:02.3	13.1	147.2					
	e L	Z	05:25:04.8			18.5	72331		5.8	
TNS	e Pn	Z	05:18:14.6	14.0	137.1					
	e L	Z	05:25:29.8			20.0	72908		5.8	
WLF	e Pn	Z	05:18:26.7	14.7	129.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/14	08:41:40.9	38.664N	20.246E	10.0G				SZGRF
2003/08/14	08:41:39.5	38.953N	20.645E	10G	4.8	4.6		NEIC

Greece

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	08:44:18.7	11.1	150.7					
	e Sn	E	08:46:19.6							
BFO	e Pn	Z	08:44:42.6	12.9	132.0					
MOX	e Pn	Z	08:44:49.9	13.3	148.0					
TNS	e Pn	Z	08:45:01.6	14.2	137.9					
	e Sn	N	08:47:31.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/14	12:18:12.3	38.432N	20.536E	10.0G		4.5		SZGRF
2003/08/14	12:18:14.0	38.790N	20.665E	10G	4.9	4.8		NEIC

Greece

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
ARSA	e Pn	Z	12:20:27.4	9.3	154.3					
KBA	e Pn	Z	12:20:36.7	9.9	144.6					
	e Sn	N	12:22:23.9							
MOA	e Pn	Z	12:20:41.0	10.2	150.6					
	e Sn	E	12:22:32.0							

	WTTA	e Pn	Z	12:20:48.2	10.7	138.9				
		e Sn	N	12:22:47.0						
	GEC2	e Pn	Z	12:20:54.8	11.2	151.0				
		e Sn	E	12:22:59.5						
	BFO	e Pn	Z	12:21:18.4	13.0	132.4				
	MOX	e Pn	Z	12:21:25.2	13.5	148.2				
		e L	Z	12:27:20.2			19.8	3856		4.5
	TNS	e Sn	N	12:24:08.6	14.3	138.2				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/14	15:08:53.9	38.590N	20.917E	10.0G		4.2		SZGRF
2003/08/14	15:08:55.9	38.875N	20.659E	10G	4.6			NEIC

Greece

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GEC2	e Pn	Z	15:11:36.3	11.1	150.8					
		e Sn	E	15:13:39.0							
	WET	e Pn	Z	15:11:43.0	11.7	148.6					
	MOX	e Pn	Z	15:12:07.1	13.4	148.1					
		e L	Z	15:18:24.6			14.2	1353		4.2	
	TNS	e Sn	N	15:14:53.4	14.3	138.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/14	16:18: 2.8	38.358N	19.891E	10.0G		4.8		SZGRF
2003/08/14	16:18:02.7	38.876N	20.538E	10G	5.1	5.2		NEIC

Ionian Sea

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GEC2	e Pn	Z	16:20:43.0	11.1	151.3					
		e Sn	N	16:22:46.2							
	WET	e Pn	Z	16:20:49.9	11.6	149.0					
		e Sn	E	16:22:58.6							
	BRG	e Pn	Z	16:21:07.6	12.9	156.3					
	BFO	e Pn	Z	16:21:07.2	12.9	132.5					
	MOX	e Pn	Z	16:21:14.6	13.3	148.5					
		e L	Z	16:27:09.2			20.0	8796		4.8	
	TNS	e Pn	Z	16:21:24.4	14.2	138.4					
		e Sn	N	16:23:55.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/14	18:23:05.9	19.894S	178.019W	557D	4.9			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	18:41:45.1	147.5	19.5	1.3	20			
	i PKPbc	- Z	18:41:48.6			1.0	173			
	i PKPab	Z	18:41:51.8			1.2	117			
	e pPKPbc	Z	18:43:59.2							
	e SKPbc	Z	18:44:33.2							
	e sPKPbc	Z	18:44:45.8							
	e pPP	Z	18:47:14.6							
	e sPP	Z	18:48:13.9							
	e		18:58:17.9							
	e SS	T	19:03:31.4							
	e sSS	T	19:07:05.8							
	e SSS	T	19:09:15.2							
	e LQ	T	19:22:56.0							
GRA1	e PKPdf	Z	18:41:48.2	149.3	17.2					
	e PKPbc	Z	18:41:52.5							
	e PKPab	Z	18:42:00.6							
	e pPKP	Z	18:44:07.8							
	e		18:45:27.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/14	20:46:53.9	39.093N	21.316E	10.0G		3.8		SZGRF
2003/08/14	20:46:50.5	38.863N	20.558E	10G	4.8			NEIC

Greece

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	20:49:32.1	11.1	151.2					
	e Sn	E	20:51:31.5							
WET	e Pn	Z	20:49:38.6	11.7	149.0					
MOX	e Pn	Z	20:50:03.1	13.4	148.4					
	e L	Z	20:55:56.9			18.8	718		3.8	
TNS	e Sn	E	20:52:47.7	14.2	138.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/14	22:23:18.5	52.263N	176.783E	33.0N	4.6			SZGRF
2003/08/14	22:23:34.2	55.418N	162.357E	33N	4.9			NEIC

Rat Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:35:10.2	72.2	16.7	1.1	5	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/15								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	05:57:58.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/15	09:22:25.8	41.617N	125.991W	33.0N	4.5			SZGRF
2003/08/15	09:22:13.0	40.984N	125.596W	4	5.3			NEIC

Off coast of northern California, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	09:34:39.1	81.7	328.5	1.1	5	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/15	15:29:19.6	34.146N	144.680E	33.0N	4.6			SZGRF

Off east coast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	15:41:59.8	86.6	37.0	1.4	7	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/16	02:05:58.1	0.886N	25.080W	33.0N	4.5	4.2		SZGRF
2003/08/16	02:05:52.2	0.555N	25.102W	10G	4.9	4.4		NEIC

Central Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	02:15:46.5	58.1	224.2	1.1	6	4.5		
	e S	N	02:23:56.3							
	e L	Z	02:40:37.1			21.5	231		4.2	
CLL	e P	Z	02:16:00.0	59.9	225.5	1.2	7	4.6		
	e PP	Z	02:18:17.2							
	e PPP	Z	02:19:44.5							
	e S	N	02:24:16.1							
	e SSS	N	02:30:51.1							
	e LR	Z	02:34:26.1							
	e L	Z	02:39:30.2			20.0	159		4.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/16	05:44:22.4	46.423N	12.640E	10.0G			2.8	SZGRF
2003/08/16	05:44:21.1	46.507N	12.795E	10G				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	05:45:03.6	2.4	195.0					2.2
	e Sn	N	05:45:35.7							
STU	e Pn	Z	05:45:15.3	3.3	131.7					3.0
	e Sn	E	05:45:51.8							
GRA1	e Sn	N	05:45:54.3	3.4	161.2					2.9
BFO	e Pn	Z	05:45:17.2	3.5	119.4					2.7
	e Sn	N	05:45:58.9							
TANN	e Pn	Z	05:45:22.6	3.9	176.6					2.8
	e Sn	N	05:46:11.2							
MOX	e Pn	Z	05:45:25.5	4.2	168.9					2.9
	e Sn	N	05:46:15.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/16	10:58:52.6	44.780N	119.000E	33.0N	5.6	5.2		SZGRF
2003/08/16	10:58:42.9	43.796N	119.618E	24D	5.6	5.1		NEIC

Northeastern China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	11:09:22.0	64.6	50.2	1.1	67	5.8		
	e pP	Z	11:09:29.8							
BRG	e P	Z	11:09:28.3	65.6	49.8	1.0	49	5.7		
	e pP	Z	11:09:35.6							
CLL	i P	- Z	11:09:29.2	65.7	49.4	0.8	77	6.0		
	e		11:09:36.9							
	e		11:09:40.1							
	e PP	Z	11:11:53.9							
	e PPP	Z	11:13:37.8							
	e S	E	11:18:15.4							
	e LQ	T	11:30:02.5							
	e L	Z	11:41:14.0			20.0	3580		5.6	
NRDL	e P	Z	11:09:33.2	66.3	48.0	1.0	34	5.5		
	e pP	Z	11:09:40.8							
CLZ	e P	Z	11:09:35.3	66.6	47.9	1.0	41	5.6		
	e pP	Z	11:09:42.8							
WERD	e P	Z	11:09:35.5	66.6	48.7	1.1	45	5.6		
	e pP	Z	11:09:43.0							
MOX	e P	Z	11:09:36.6	66.8	48.3	1.1	39	5.6		
	e pP	Z	11:09:44.1							
GEC2	e P	Z	11:09:37.6	67.0	48.9	1.2	34	5.5		
	e pP	Z	11:09:45.0							
WET	e P	Z	11:09:39.2	67.2	48.6	1.1	39	5.6		
	e pP	Z	11:09:46.5							
UBBA	e P	Z	11:09:40.4	67.5	47.4	1.5	46	5.5		
	e pP	Z	11:09:48.2							
GRA1	e P	Z	11:09:42.5	67.6	47.8	1.1	107	6.0		

		e pP	Z	11:09:50.0						
		e L	Z	11:42:25.8			19.7	3020		5.5
	GRFO	e P	Z	11:09:42.3	67.6	47.8	1.1	86	5.9	
		e pP	Z	11:09:50.0						
		e PP	Z	11:12:24.4						
		e S	N	11:18:44.4						
		e L	Z	11:36:39.3			21.2	952		5.0
	BUG	e P	Z	11:09:45.5	68.3	45.9	1.1	38	5.5	
		e pP	Z	11:09:52.8						
	TNS	e P	Z	11:09:48.1	68.6	46.3	1.2	25	5.3	
		e pP	Z	11:09:55.5						
	FUR	e P	Z	11:09:48.4	68.6	47.4	1.1	103	6.0	
		e pP	Z	11:09:56.1						
	STU	e P	Z	11:09:51.9	69.2	46.3	1.0	38	5.6	
	BFO	e P	Z	11:09:56.0	70.0	45.7	1.1	42	5.6	
		e pP	Z	11:10:03.4						
	WLF	e P	Z	11:09:56.9	70.0	44.8	1.5	15	5.0	
		e pP	Z	11:10:04.1						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/16	14:10:39.3	5.400S	151.097E	60D	5.2			NEIC

New Britain, Papua New Guinea, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	14:29:33.0	124.3	51.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/16	14:48:54.5	37.410N	21.449E	10.0G	4.4			SZGRF
2003/08/16	14:49:11.5	38.743N	20.532E	10G	4.8			NEIC

Southern Greece

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	14:51:53.5	11.2	151.6					
WET	e Pn	Z	14:52:00.5	11.8	149.3					
BFO	e Pn	Z	14:52:17.5	13.0	132.9					
MOX	e Pn	Z	14:52:24.4	13.5	148.7					
TNS	e Pn	Z	14:52:36.2	14.3	138.7					
CLZ	e P	Z	14:52:51.3	14.9	147.6	1.1	25	4.3		
WLF	e P	Z	14:52:53.2	15.0	131.4	1.0	40	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/16	15:39:42.4	4.584S	151.760E	157D	5.3			NEIC

New Britain, Papua New Guinea, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	15:58:24.2	124.0	49.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/16	19:23:39.2	27.025N	127.939E	33.0N	4.8			SZGRF
2003/08/16	19:23:43.2	29.107N	130.433E	78?	4.3			NEIC

Ryukyu Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	19:36:11.6	84.5	50.0	1.6	10	4.8		
	e		19:36:29.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/16	19:33:10.9	48.800N	152.378E	33.0N	5.0			SZGRF
2003/08/16	19:33:10.8	48.209N	153.317E	102*	4.7			NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	19:44:43.2	74.9	26.2	0.9	30	5.4		
	e L	Z	20:16:46.2			18.0	258		4.6	
BRG	e P	Z	19:44:43.9	75.0	26.7	1.0	8	4.7		
CLZ	e P	Z	19:44:45.3	75.1	24.6	1.0	14	5.0		
WERD	e P	Z	19:44:48.5	75.8	25.6	0.8	6	4.7		
MOX	e P	Z	19:44:49.1	75.8	25.2	1.1	13	4.9		
UBBA	e P	Z	19:44:50.5	76.1	24.2	2.4	39	5.1		
BUG	e P	Z	19:44:51.3	76.2	22.5	1.2	16	5.0		
GRA1	e P	Z	19:44:55.2	76.8	24.9	0.9	28	5.4		
GRFO	e P	Z	19:44:55.1	76.8	24.9	0.9	22	5.3		
WET	e P	Z	19:44:55.1	76.8	25.8	1.0	12	5.0		
GEC2	e P	Z	19:44:55.0	76.9	26.3	1.1	7	4.7		
TNS	e P	Z	19:44:56.2	77.0	23.2	0.8	10	5.0		
FUR	e P	Z	19:45:02.7	78.2	24.8	0.9	19	5.2		
STU	e P	Z	19:45:02.2	78.2	23.5	0.8	9	4.9		
BFO	e P	Z	19:45:06.1	78.8	22.9	0.9	7	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/16	21:58:55.2	46.642N	14.628E	10.0G			3.0	SZGRF
2003/08/16	21:58:52.5	46.512N	14.571E	5G				NEIC

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pg	Z	21:59:36.1	2.4	165.6					2.7

	e Sg	N	22:00:08.9					
WET	e Pn	Z	21:59:39.7	2.9	156.0			2.7
	e Sg	N	22:00:23.1					
GRA1	e Pn	Z	21:59:54.8	3.9	143.6			3.4
	e Sg	N	22:00:56.1					
TANN	e Pn	Z	21:59:57.0	4.1	159.5			3.2
	e Sg	E	22:01:02.7					
WERD	e Pn	Z	21:59:57.6	4.2	158.3			3.0
	e Sg	N	22:01:05.9					
MOX	e Pn	Z	22:00:02.1	4.6	153.6			3.1
	e Sg	E	22:01:17.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/17	02:46:52.2	20.842N	121.781E	33.0N	4.8	4.9		SZGRF
2003/08/17	02:46:51.5	20.287N	121.798E	65D	5.2			NEIC

Philippine Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	02:59:23.7	85.5	63.1	1.0	15	5.1		
	e pP	Z	02:59:40.3							
	e sP	Z	02:59:48.6							
	e PP	Z	03:02:45.5							
	e SKSac	R	03:09:40.4							
	e S	T	03:09:47.8							
	e PPS	E	03:11:14.1							
	e SS	R	03:15:29.7							
	e LR	Z	03:27:58.2							
	e L	Z	03:41:58.1			22.0	434		4.8	
GRA1	e P	Z	02:59:32.6	87.1	61.6	1.5	11	4.8		
	e L	Z	03:42:47.0			21.6	502		4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/17	15:37:14.0	38.642N	20.521E	10G	4.7			NEIC

Greece

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pn	Z	15:40:17.8	12.9	145.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/17								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pn	Z	16:59:23.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/18	02:43: 5.4	75.135N	10.217E	33.0N	4.4			SZGRF
2003/08/18	02:42:30.2	78.405N	7.647E	10G	4.6	4.4		NEIC

Svalbard, Norway, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z	02:48:05.6	25.9	358.9	1.3	28	4.6		
CLZ	e P	Z	02:48:11.5	26.6	358.8	1.4	12	4.2		
BUG	e P	Z	02:48:14.9	27.0	0.2	1.5	26	4.5		
CLL	e P	Z	02:48:16.0	27.2	357.6	1.7	14	4.2		
UBBA	e P	Z	02:48:20.2	27.6	359.0	1.5	10	4.1		
BRG	e P	Z	02:48:20.5	27.6	357.3	1.6	19	4.4		
MOX	e P	Z	02:48:22.5	27.8	358.3	0.9	12	4.6		
WERD	e P	Z	02:48:24.1	28.0	358.0	1.9	25	4.6		
TNS	e P	Z	02:48:25.8	28.2	359.7	1.2	13	4.5		
GRA1	e P	Z	02:48:30.7	28.7	358.5	1.0	9	4.4		
WLF	e P	Z	02:48:31.1	28.7	0.6	1.5	11	4.3		
WET	e P	Z	02:48:35.9	29.3	357.9	1.4	9	4.2		
STU	e P	Z	02:48:39.3	29.6	359.4	1.0	19	4.7		
GEC2	e P	Z	02:48:39.1	29.6	357.5	1.3	9	4.2		
BFO	e P	Z	02:48:42.9	30.1	359.7	2.1	47	4.8		
FUR	e P	Z	02:48:44.9	30.3	358.6	1.7	39	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/18	03:41:46.5	52.007N	164.800W	33.0N	4.8			SZGRF
2003/08/18	03:41:47.9	52.811N	168.225W	33N	4.6	4.3		NEIC

South of Alaska

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:53:43.4	77.5	359.7	1.1	12	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/18	07:31:52.4	18.945S	169.212E	400G	4.4			NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	07:50:44.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/18	09:03:15.8	31.658N	95.838E	33.0N	6.1	5.6		SZGRF

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/18	09:03:03.4	29.553N	95.584E	33N	5.7		5.3	NEIC

Xizang

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	09:13:24.9	62.2	76.8	1.3	224	5.8		
BRG	e P	Z	09:13:26.9	62.5	76.1	5.1	4462	6.5		
CLL	i P	+ Z	09:13:29.5	62.9	75.7	0.7	11	5.1		
	e		09:13:35.2							
	e PP	Z	09:15:49.9							
	e S	N	09:21:58.1							
	e ScS	N	09:23:19.1							
	e SS	E	09:25:58.2							
	e SSS	Z	09:28:59.0							
	e LR	Z	09:35:38.3							
	e L	Z	09:41:52.9			20.0	2876		5.4	
GEC2	e P	Z	09:13:31.5	63.1	74.9	1.3	164	6.1		
WET	e P	Z	09:13:34.3	63.6	74.5	1.4	108	5.9		
WERD	e P	Z	09:13:34.3	63.6	74.7	1.2	95	5.9		
MOX	e P	Z	09:13:36.7	63.9	74.4	1.5	103	5.7		
NRDL	e P	Z	09:13:39.9	64.3	74.2	1.3	312	6.3		
CLZ	e P	Z	09:13:39.8	64.4	74.1	2.9	1889	6.7		
GRA1	e P	Z	09:13:40.7	64.4	73.7	1.4	251	6.2		
	e S	N	09:22:20.7							
	e L	Z	09:43:11.1			18.1	3375		5.6	
FUR	e P	Z	09:13:43.1	64.8	73.0	1.0	173	6.3		
UBBA	e P	Z	09:13:42.8	64.9	73.3	1.6	161	6.0		
STU	e P	Z	09:13:50.2	66.0	71.9	1.4	268	6.3		
TNS	e P	Z	09:13:50.1	66.0	72.0	1.2	95	5.9		
BUG	e P	Z	09:13:52.3	66.3	71.7	1.3	163	6.1		
WLF	e P	Z	09:14:00.9	67.6	70.2	1.4	436	6.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/18	09:59:41.3	36.476N	139.713E	33.0N	5.1			SZGRF
2003/08/18	09:59:41.1	35.662N	139.935E	88*	4.7			NEIC

Eastern Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	10:11:50.6	81.3	41.7	0.8	13	5.0		
CLL	e P	Z	10:11:50.1	81.4	41.1	0.7	24	5.3		
NRDL	e P	Z	10:11:52.1	81.6	39.1	0.9	8	4.8		
CLZ	e P	Z	10:11:54.8	82.0	39.2	1.1	20	5.2		
WERD	e P	Z	10:11:55.5	82.3	40.5	0.8	6	4.8		
MOX	e P	Z	10:11:56.5	82.5	40.0	0.9	8	4.9		
GEC2	e P	Z	10:11:58.8	82.9	41.3	1.2	11	4.8		
UBBA	e P	Z	10:11:57.9	83.0	38.9	1.2	8	4.7		
WET	e P	Z	10:11:59.6	83.1	40.8	1.5	16	5.0		
GRA1	e P	Z	10:12:01.3	83.3	39.7	0.9	30	5.5		

TNS	e P	Z	10:12:02.4	84.0	37.7	1.3	13	5.0	
STU	e P	Z	10:12:08.9	84.9	38.2	1.3	29	5.4	
WLF	e P	Z	10:12:11.7	85.4	36.1	1.8	40	5.4	
BFO	e P	Z	10:12:11.9	85.6	37.5	1.1	17	5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/18	15:04: 5.0	36.744N	74.932E	33.0N	5.0			SZGRF

Northwestern Kashmir

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	15:12:30.9	46.7	80.8	0.9	10	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/18								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	20:56:13.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/19	01:13:30.4	33.024S	179.257W	48*	5.2			NEIC

South of Kermadec Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z	01:33:24.4	161.6	28.9					
	e PKPab	Z	01:34:10.8							
	e PP	Z	01:37:54.7							
	e L	Z	02:50:52.3			21.7	269		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/19	04:26:48.8	28.310N	131.332E	33.0N	5.3	5.5		SZGRF
2003/08/19	04:26:55.6	29.145N	129.287E	33N	4.9			NEIC

Southeast of Ryukyu Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:39:24.5	83.9	50.8	2.0	48	5.3		
	e L	Z	05:21:10.3			18.5	1837		5.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/19	13:52: 9.4	22.460S	179.500W	605.6				SZGRF

2003/08/19 13:52:10.0 21.899S 179.608W 605D 5.0 NEIC
South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPdf	Z	14:10:45.9	148.5	17.4					
	e PKPbc	Z	14:10:51.0							
	e PKPab	Z	14:10:56.2							
CLL	e PKPdf	Z	14:10:46.6	149.0	23.2					
	e PKPbc	Z	14:10:52.1							
	e PKPab	Z	14:10:58.5							
CLZ	e PKPdf	Z	14:10:47.2	149.1	18.2					
	e PKPbc	Z	14:10:52.7							
BRG	e PKPdf	Z	14:10:47.2	149.2	25.1					
	e PKPbc	Z	14:10:52.7							
	e PKPab	Z	14:10:59.2							
MOX	e PKPdf	Z	14:10:48.0	149.9	21.1					
	e PKPbc	Z	14:10:54.4							
	e PKPab	Z	14:11:02.2							
WERD	e PKPdf	Z	14:10:48.1	150.0	22.5					
	e PKPbc	Z	14:10:54.5							
	e PKPab	Z	14:11:02.7							
BUG	e PKPbc	Z	14:10:54.2	150.0	12.8					
UBBA	e PKPbc	Z	14:10:54.9	150.1	18.1					
GRA1	e PKPbc	Z	14:10:56.8	150.9	21.0					
	e PKPab	Z	14:11:07.6							
	e pPKPbc	Z	14:13:15.4							
TNS	e PKPbc	Z	14:10:56.7	151.0	15.5					
	e PKPab	Z	14:11:07.0							
WET	e PKPbc	Z	14:10:56.7	151.0	24.5					
	e PKPab	Z	14:11:08.0							
GEC2	e PKPbc	Z	14:10:56.9	151.0	26.2					
	e PKPab	Z	14:11:08.1							
WLF	e PKPdf	Z	14:10:51.6	151.9	11.4					
	e PKPbc	Z	14:10:59.2							
	e PKPab	Z	14:11:11.1							
STU	e PKPdf	Z	14:10:51.9	152.2	17.7					
	e PKPbc	Z	14:10:59.4							
FUR	e PKPbc	Z	14:10:59.6	152.3	22.2					
	e PKPab	Z	14:11:13.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/19	17:30:46.9	46.900N	147.300E	33.0N	4.9			SZGRF
2003/08/19	17:31:32.0	47.380N	145.842E	419*	4.4			NEIC

Northwest of Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z	17:42:22.2	73.2	29.6	1.8	24	4.9		

CLL	e P	Z	17:42:22.7	73.3	31.2	1.1	20	5.1
BRG	e P	Z	17:42:23.1	73.4	31.7	1.0	6	4.5
CLZ	e P	Z	17:42:25.5	73.7	29.7	0.8	11	5.0
MOX	e P	Z	17:42:28.6	74.4	30.3	0.9	5	4.6
UBBA	e P	Z	17:42:30.7	74.7	29.3			
BUG	e P	Z	17:42:32.1	75.0	27.6	0.8	12	5.1
GEC2	e P	Z	17:42:33.7	75.2	31.3	1.2	6	4.6
WET	e P	Z	17:42:34.3	75.2	30.8	1.0	10	4.9
GRA1	e P	Z	17:42:34.4	75.3	29.9	1.0	22	5.3
TNS	e P	Z	17:42:36.6	75.7	28.2	1.1	9	4.8
BFO	e P	Z	17:42:45.8	77.4	27.9	0.8	6	4.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/19	23:31:18.7	22.430S	177.640W	33.0N				SZGRF
2003/08/19	23:32:29.9	20.883S	179.066W	650G	4.7			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPdf	Z	23:50:59.3	146.9	22.3					
	e PKPbc	Z	23:51:02.6							
CLL	e PKPdf	Z	23:51:01.2	148.1	21.7					
	e PKPbc	Z	23:51:05.7							
	e PKPab	Z	23:51:11.0							
CLZ	e PKPdf	Z	23:51:01.3	148.2	16.9					
	e PKPbc	Z	23:51:05.9							
	e PKPab	Z	23:51:11.6							
BRG	e PKPdf	Z	23:51:01.6	148.3	23.6					
	e PKPbc	Z	23:51:06.3							
	e PKPab	Z	23:51:11.9							
BUG	e PKPbc	Z	23:51:07.6	149.0	11.6					
	e PKPab	Z	23:51:14.3							
MOX	e PKPdf	Z	23:51:02.7	149.1	19.7					
	e PKPbc	Z	23:51:08.1							
	e PKPab	Z	23:51:14.8							
WERD	e PKPbc	Z	23:51:08.1	149.1	21.0					
	e PKPab	Z	23:51:15.2							
GRA1	e PKPbc	Z	23:51:10.7	150.1	19.5					
	e PKPab	Z	23:51:19.7							
TNS	e PKPbc	Z	23:51:10.4	150.1	14.2					
	e PKPab	Z	23:51:19.0							
WET	e PKPbc	Z	23:51:10.6	150.2	22.9					
	e PKPab	Z	23:51:20.4							
GEC2	e PKPbc	Z	23:51:10.7	150.2	24.6					
WLF	e PKPbc	Z	23:51:12.7	150.9	10.1					
	e PKPab	Z	23:51:22.9							
STU	e PKPbc	Z	23:51:13.3	151.3	16.3					
	e PKPab	Z	23:51:24.3							

FUR	e PKPbc	Z	23:51:13.5	151.5	20.6	
	e PKPab	Z	23:51:25.5			
BFO	e PKPbc	Z	23:51:14.3	151.9	14.8	
	e PKPab	Z	23:51:26.6			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/20	02:51:38.6	39.100N	35.218E	33.0N	4.1			SZGRF
2003/08/20	02:51:04.4	38.254N	38.805E	10G	4.2			NEIC

Turkey

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	02:55:49.6	20.9	111.0	1.2	6	3.6		
WET	e P	Z	02:55:55.4	21.5	110.6					
GRA1	e P	Z	02:56:09.1	22.7	109.7	2.4	83	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/20	09:14:48.5	37.490N	38.133E	33.0N	4.3			SZGRF
2003/08/20	09:14:44.2	38.160N	38.912E	10G	4.1			NEIC

Turkey

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	09:19:30.2	21.0	111.1	1.0	8	4.0		
WET	e P	Z	09:19:36.3	21.6	110.7	1.5	12	4.1		
BRG	e P	Z	09:19:37.4	21.7	116.2	1.6	20	4.3		
TANN	e P	Z	09:19:45.0	22.4	113.0					
WERD	e P	Z	09:19:46.1	22.5	112.9					
GRA1	e P	Z	09:19:48.9	22.8	109.8	1.3	30	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/20								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	20:27:27.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/20	23:54:01.7	22.110S	179.642W	600G	4.6			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPbc	Z	00:12:41.4	147.9	23.9					
NRDL	e PKPbc	Z	00:12:43.2	148.7	17.6					

	e PKPab	Z	00:12:49.9		
CLL	e PKPbc	Z	00:12:44.5	149.2	23.3
	e PKPab	Z	00:12:51.6		
CLZ	e PKPbc	Z	00:12:45.1	149.3	18.4
	e PKPab	Z	00:12:52.1		
BRG	e PKPbc	Z	00:12:45.1	149.3	25.3
	e PKPab	Z	00:12:52.6		
MOX	e PKPbc	Z	00:12:46.8	150.1	21.3
	e PKPab	Z	00:12:55.7		
WERD	e PKPbc	Z	00:12:47.1	150.2	22.7
	e PKPab	Z	00:12:56.0		
BUG	e PKPbc	Z	00:12:46.5	150.2	13.0
	e PKPab	Z	00:12:57.5		
GRA1	e PKPbc	Z	00:12:49.0	151.1	21.2
	e PKPab	Z	00:13:00.2		
GRFO	e PKPbc	Z	00:12:49.2	151.1	21.2
	e PKPab	Z	00:13:00.3		
TNS	e PKPbc	Z	00:12:49.1	151.2	15.7
	e PKPab	Z	00:12:59.9		
WET	e PKPbc	Z	00:12:49.0	151.2	24.6
	e PKPab	Z	00:13:00.8		
GEC2	e PKPbc	Z	00:12:49.1	151.2	26.4
	e PKPab	Z	00:13:00.5		
	e pPKPab	Z	00:15:09.5		
WLF	e PKPbc	Z	00:12:51.7	152.1	11.5
	e PKPab	Z	00:13:04.3		
FUR	e PKPbc	Z	00:12:51.8	152.5	22.4
	e PKPab	Z	00:13:06.0		
BFO	e PKPbc	Z	00:12:53.2	153.0	16.5
	e PKPab	Z	00:13:07.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/21	02:17:58.1	26.998N	101.016E	33.0N	5.0	4.3		SZGRF
2003/08/21	02:17:53.7	27.381N	101.189E	33N	4.9			NEIC

Yunnan, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	02:29:04.5	69.4	71.5	0.9	13	5.0		
	e pP	Z	02:29:14.5							
	e S	N	02:38:26.6							
	e L	Z	03:01:50.6			20.2	185		4.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/21	04:02:11.7	28.111N	59.108E	33.0N	5.0	5.4		SZGRF
2003/08/21	04:02:09.8	29.091N	59.814E	20D	5.6	5.8		NEIC

Southern Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	04:09:46.1	40.1	102.2	1.2	78	5.2		
BRG	e P	Z	04:09:49.2	40.4	104.8	1.0	13	4.6		
WET	e P	Z	04:09:50.6	40.7	101.8	2.6	151	5.3		
RUE	e P	Z	04:09:53.2	41.0	106.4	0.9	56	5.3		
CLL	i P	+ Z	04:09:55.1	41.1	104.3	1.2	268	5.9		
	e PP	Z	04:11:39.0							
	e S	E	04:16:11.2							
	e SS	E	04:19:13.4							
	e L	Z	04:30:53.6			22.0	6961		5.5	
WERD	e P	Z	04:09:56.2	41.3	102.7	1.3	6	4.2		
FUR	e P	Z	04:09:57.3	41.6	99.3	0.7	17	4.9		
MOX	e P	Z	04:10:00.4	41.8	102.3	1.1	9	4.4		
RGN	e P	Z	04:10:00.9	41.8	108.2	1.1	194	5.8		
GRA1	e P	Z	04:10:00.9	41.9	100.9	1.2	38	5.0		
	e PP	R	04:11:53.7							
	e S	R	04:16:20.0							
	e ScS	R	04:19:36.7							
	e L	Z	04:31:15.0			20.1	4783		5.4	
CLZ	e P	Z	04:10:09.5	42.8	102.4	1.0	43	5.1		
NRDL	e P	Z	04:10:11.8	43.1	102.9	1.0	41	5.1		
BFO	e P	Z	04:10:12.2	43.5	96.9	1.5	14	4.5		
TNS	e P	Z	04:10:16.2	43.7	99.0	1.5	77	5.2		
BUG	e P	Z	04:10:23.7	44.6	99.2	1.2	48	5.3		
WLF	e P	Z	04:10:26.6	45.1	96.5	1.2	32	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/21	04:53: 6.3	15.022N	52.874E	14.7	5.0			SZGRF
2003/08/21	04:53:01.8	14.637N	52.330E	10G	4.9			NEIC

Eastern Arabian Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	05:01:30.7	46.6	123.7	1.6	20	5.0		
	e		05:01:36.7							
BRG	e P	Z	05:01:38.9	47.6	125.5	1.2	14	5.0		
WERD	e P	Z	05:01:44.2	48.2	123.4	1.5	24	5.1		
CLL	e P	Z	05:01:43.6	48.3	124.8	2.0	30	5.1		
GRA1	e P	Z	05:01:45.1	48.4	121.7	1.2	21	5.1		
RUE	e P	Z	05:01:47.2	48.6	126.5	1.1	43	5.4		
MOX	e P	Z	05:01:45.9	48.7	122.8	1.5	22	5.0		
BFO	e P	Z	05:01:51.4	49.3	117.6	1.5	27	5.1		
CLZ	e P	Z	05:01:57.0	50.0	122.3	1.3	28	5.0		
TNS	e P	Z	05:01:59.0	50.2	119.2	1.4	12	4.6		
NRDL	e P	Z	05:02:00.9	50.5	122.5	1.5	21	4.8		

WLF	e P	Z	05:02:07.4	51.2	116.4	1.5	30	5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/21	12:12:50.2	45.124S	167.172E	28G	6.5	7.5		NEIC

South Island, New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e PKPab	Z	12:33:34.7	160.8	71.4					
BRG	e PKPdf	Z	12:32:47.3	161.3	82.6					
GEC2	e PKPdf	Z	12:32:47.4	161.6	88.4					
	e PKPab	Z	12:33:34.7							
CLL	e PKPdf	Z	12:32:46.5	161.8	80.3	2.5	510			
	i PKPdif	Z	12:33:02.1							
	e PKPab	Z	12:33:39.1							
	e PP	Z	12:37:31.8							
	e PPr	Z	12:40:25.8							
	e PPP	Z	12:41:26.7							
	e SKKSac	R	12:43:56.5							
	e PPPr	Z	12:44:59.6							
	e PSKS	Z	12:47:46.5							
	e SS	E	12:57:46.6							
	e SSS	R	13:04:13.9							
	e L	Z	13:51:31.4			22.0	98905		7.6	
WET	e PKPdf	Z	12:32:48.0	162.1	86.8					
WERD	e PKPdf	Z	12:32:48.0	162.4	82.2					
	e PKPab	Z	12:33:37.8							
MOX	e PKPdf	Z	12:32:48.7	162.8	80.8					
GRA1	e PKPdf	Z	12:32:49.2	163.2	83.5					
	e PKPab	Z	12:33:41.7							
	e PP	Z	12:37:35.6							
	e SSS	N	13:03:30.6							
	e L	Z	13:59:49.8			18.9	71926		7.6	
FUR	e PKPdf	Z	12:32:49.7	163.2	88.6					
NRDL	e PKPdf	Z	12:32:49.7	163.3	73.0					
	e PKPab	Z	12:33:44.0							
CLZ	e PKPdf	Z	12:32:49.7	163.3	75.5					
TNS	e PKPdf	Z	12:32:51.1	164.9	78.5					
	e PKPab	Z	12:33:48.7							
BFO	e PKPdf	Z	12:32:50.4	165.2	85.4					
	e PKPab	Z	12:33:49.6							
BUG	e PKPdf	Z	12:32:52.3	165.3	72.5					
	e PKPab	Z	12:33:51.5							
WLF	e PKPdf	Z	12:32:53.0	166.4	77.7					
	e PKPab	Z	12:33:55.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/21	12:45:41.0	45.109S	167.203E	33N	5.7			NEIC

South Island, New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPab	Z	13:06:22.6	161.1	77.7					
BRG	e PKPdf	Z	13:05:37.0	161.3	82.5					
	e PKPab	Z	13:06:22.9							
GEC2	e PKPdf	Z	13:05:37.3	161.6	88.3					
	e PKPab	Z	13:06:24.3							
CLL	i PKPdf	Z	13:05:37.2	161.8	80.2	1.9	38			
	e PKPab	Z	13:06:24.7			1.9	91			
	e PP	Z	13:10:06.8							
WET	e PKPdf	Z	13:05:37.9	162.2	86.7					
	e PKPab	Z	13:06:26.8							
WERD	e PKPdf	Z	13:05:38.1	162.4	82.1					
	e PKPab	Z	13:06:27.6							
MOX	e PKPdf	Z	13:05:38.4	162.8	80.7					
	e PKPab	Z	13:06:29.4							
GRA1	e PKPdf	Z	13:05:38.3	163.2	83.4					
	e PKPab	Z	13:06:31.5							
FUR	e PKPdf	Z	13:05:39.2	163.3	88.5					
	e PKPab	Z	13:06:31.2							
NRDL	e PKPab	Z	13:06:32.5	163.3	72.9					
CLZ	e PKPdf	Z	13:05:39.6	163.3	75.4					
	e PKPab	Z	13:06:32.0							
TNS	e PKPab	Z	13:06:38.8	164.9	78.4					
BFO	e PKPab	Z	13:06:39.4	165.2	85.3					
BUG	e PKPab	Z	13:06:40.6	165.3	72.4					
WLF	e PKPdf	Z	13:05:42.1	166.4	77.6					
	e PKPab	Z	13:06:45.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/21	14:12:27.5	45.290S	166.840E	21	5.9			NEIC

South Island, New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPdf	Z	14:32:24.7	161.0	78.6					
	e PKPab	Z	14:33:10.4							
	e pPKPab	Z	14:33:19.0							
BRG	e PKPdf	Z	14:32:24.5	161.2	83.4					
	e PKPab	Z	14:33:10.8							
	e pPKPab	Z	14:33:19.2							
GEC2	e PKPdf	Z	14:32:24.7	161.5	89.1					
	e PKPab	Z	14:33:12.0							
	e pPKPab	Z	14:33:20.6							
CLL	e PKPdf	Z	14:32:24.8	161.7	81.1					

	e	pPKPdf	Z	14:32:33.4		
	e	PKPab	Z	14:33:12.9		
	e	pPKPab	Z	14:33:21.3		
WET	e	PKPdf	Z	14:32:24.9	162.0	87.6
	e	PKPab	Z	14:33:14.4		
	e	pPKPab	Z	14:33:22.9		
WERD	e	PKPdf	Z	14:32:25.5	162.3	83.0
	e	PKPab	Z	14:33:15.1		
	e	pPKPab	Z	14:33:23.6		
MOX	e	PKPdf	Z	14:32:26.1	162.7	81.7
	e	pPKPdf	Z	14:32:34.3		
	e	PKPab	Z	14:33:16.9		
	e	pPKPab	Z	14:33:25.3		
GRA1	e	PKPdf	Z	14:32:27.0	163.0	84.3
	e	PKPab	Z	14:33:19.0		
	e	pPKPab	Z	14:33:27.7		
FUR	e	PKPdf	Z	14:32:26.9	163.1	89.4
	e	PKPab	Z	14:33:18.7		
	e	pPKPab	Z	14:33:27.3		
NRDL	e	PKPdf	Z	14:32:26.4	163.2	73.9
	e	PKPab	Z	14:33:20.4		
	e	pPKPab	Z	14:33:28.6		
CLZ	e	PKPdf	Z	14:32:27.2	163.2	76.4
	e	PKPab	Z	14:33:19.9		
	e	pPKPab	Z	14:33:28.6		
TNS	e	PKPdf	Z	14:32:27.8	164.7	79.5
	e	PKPab	Z	14:33:26.4		
BFO	e	PKPdf	Z	14:32:27.5	165.0	86.3
	e	PKPab	Z	14:33:27.0		
	e	pPKPab	Z	14:33:35.1		
BUG	e	PKPdf	Z	14:32:29.2	165.2	73.5
	e	PKPab	Z	14:33:28.3		
	e	pPKPab	Z	14:33:37.0		
WLF	e	PKPdf	Z	14:32:30.2	166.3	78.8
	e	PKPab	Z	14:33:33.4		
	e	pPKPab	Z	14:33:41.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/21	16:13:41.6	1.614N	96.185E	33.0N	5.1			SZGRF
2003/08/21	16:13:40.9	2.289N	96.549E	33N	5.2	5.0		NEIC

Off west coast of northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	16:26:16.6	85.2	92.1	0.7	11	5.1		
	e pP	Z	16:26:24.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/21	23:32: 6.8	70.340N	146.580W	33.0N	5.0	5.0		SZGRF
2003/08/21	23:31:54.2	68.283N	148.128W	10	5.3	5.2		NEIC

Northern Alaska, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	23:41:47.4	58.5	352.3	1.1	28	5.2		
CLZ	e P	Z	23:41:50.0	58.8	350.9	1.0	25	5.2		
BUG	e P	Z	23:41:49.7	58.9	349.6	1.1	21	5.1		
CLL	i P	- Z	23:41:54.6	59.6	352.0	0.9	28	5.3		
	e PP	Z	23:44:11.8							
	e S	T	23:50:06.0							
	e SS	T	23:54:00.4							
	e LQ	T	23:56:38.8							
	e LR	Z	23:59:55.0							
	e L	Z	00:12:27.9			20.0	987		4.9	
BRG	e P	Z	23:41:58.4	60.1	352.4	1.1	16	5.0		
MOX	e P	Z	23:41:58.7	60.1	351.5	1.2	18	5.0		
TNS	e P	Z	23:41:59.3	60.2	350.2	0.9	11	4.9		
WERD	e P	Z	23:42:00.4	60.4	351.8	1.4	14	4.8		
WLF	e P	Z	23:42:01.6	60.5	349.4	1.1	18	5.0		
GRA1	e P	Z	23:42:05.1	61.0	351.4	1.4	24	5.0		
	e		23:42:09.1							
	e S	E	23:50:25.9							
	e SS	E	23:54:27.5							
WET	e P	Z	23:42:10.0	61.7	352.1	1.5	24	5.0		
BFO	e P	Z	23:42:12.1	62.1	350.4	1.3	19	5.0		
GEC2	e P	Z	23:42:12.2	62.1	352.5	1.1	18	5.0		
FUR	e P	Z	23:42:15.5	62.5	351.6	1.0	21	4.9		
GRA1	e L	Z	00:12:49.3	61.0	351.4	20.9	1105		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/22	01:35:10.2	46.590N	151.110E	33.0N	4.9			SZGRF
2003/08/22	01:35:08.3	46.589N	152.725E	53*	4.6			NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	01:46:54.3	76.2	27.2	0.7	16	5.2		
BRG	e P	Z	01:46:55.1	76.3	27.8	1.1	4	4.5		
CLZ	e P	Z	01:46:56.6	76.4	25.6	1.0	15	5.1		
WERD	e P	Z	01:47:00.1	77.1	26.7	1.0	6	4.7		
MOX	e P	Z	01:47:00.0	77.1	26.3	1.1	11	4.9		
GRA1	e P	Z	01:47:06.3	78.1	25.9	0.8	19	5.3		
WET	e P	Z	01:47:05.9	78.1	26.9	0.9	9	4.9		
TNS	e P	Z	01:47:07.5	78.4	24.2	0.7	8	4.9		
BFO	e P	Z	01:47:16.6	80.1	24.0	1.0	10	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/22	05:29:23.1	3.061N	75.654W	33.0N	4.8			SZGRF
2003/08/22	05:29:14.2	3.125N	77.879W	33N	5.0			NEIC

Colombia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	05:41:58.8	87.0	271.3	1.4	11	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/22	21:35:35.3	13.451S	167.115E	163D	4.9			NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	21:54:43.4	138.7	37.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/23	00:33:44.2	68.418N	147.463W	33.0N	4.5			SZGRF
2003/08/23	00:33:37.0	68.544N	148.112W	3	4.7			NEIC

Northern Alaska, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	00:43:53.6	60.8	351.5	0.9	7	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/23	02:00:13.0	63.375N	23.656W	33.0N	4.9	3.9		SZGRF
2003/08/23	02:00:11.9	63.910N	22.239W	10G	4.8	4.5		NEIC

Iceland region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e P	Z	02:04:55.3	20.8	318.0	1.2	38	4.6		
WLF	e P	Z	02:04:54.5	20.8	323.9	1.2	27	4.4		
TNS	e P	Z	02:05:00.3	21.2	321.7	1.0	83	5.1		
MOX	e P	Z	02:05:10.0	22.2	319.5	0.9	49	5.0		
CLL	e P	Z	02:05:11.7	22.3	317.9	1.2	44	4.9		
WERD	e P	Z	02:05:14.2	22.6	319.6	1.2	50	4.9		
BFO	e P	Z	02:05:15.3	22.7	324.6	1.4	34	4.7		
GRA1	e P	Z	02:05:16.9	22.7	321.2	1.1	52	5.0		
	e S	N	02:09:29.2							
	e L	Z	02:13:38.6			21.7	484		3.9	
BRG	e P	Z	02:05:17.5	23.0	318.3	1.0	27	4.8		

WET	e P	Z	02:05:27.0	23.8	321.3	2.6	250	5.3
FUR	e P	Z	02:05:28.8	24.0	323.3	1.1	34	4.8
GEC2	e P	Z	02:05:33.6	24.4	321.4	1.7	31	4.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/23	09:13:54.8	45.320S	167.010E	26				NEIC

South Island of New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	09:34:43.3	163.2	84.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/23	12:05:14.7	41.708N	79.539E	33.0N	4.8			SZGRF

Kyrgyzstan-Xinjiang border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	12:13:40.6	46.7	72.4	1.2	10	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/23	15:24:32.0	27.569S	63.314W	577D	4.9			NEIC

Santiago del Estero Province, Argentina

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z	15:37:23.4	101.5	240.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/23	15:31:55.6	8.769N	36.586W	33.0N	4.5			SZGRF

Central Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	15:41:37.9	56.9	240.9	1.3	7	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/24	03:07:38.6	46.140N	14.436E	10.0G			2.5	SZGRF
2003/08/24	03:07:37.7	46.083N	14.225E	10G				NEIC

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	03:08:22.5	2.8	172.5					2.5

	e Sg	N	03:09:06.8			
WET	e Pn	Z	03:08:27.9	3.2	163.0	
GRA1	e Pg	Z	03:08:55.1	4.1	149.7	
TANN	e Pn	Z	03:08:46.3	4.5	164.2	
	e Sg	N	03:09:59.7			
MOX	e Pn	Z	03:08:51.7	4.9	158.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/24	08:11:49.5	43.820N	146.014E	33.0N	5.0			SZGRF
2003/08/24	08:11:49.0	43.893N	147.347E	67D	4.7			NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	08:23:47.9	78.9	30.6	1.1	17	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/24	14:46:26.5	22.789N	97.840E	33.0N	4.6			SZGRF

Myanmar

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	14:57:39.5	70.7	77.2	1.1	5	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/24	14:50:18.8	18.161S	177.878W	500G	3.8			NEIC

Fiji region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z	15:09:00.8	145.8	18.6	0.8	32			
	e PKPab	Z	15:09:02.7							
GRA1	e PKPbc	Z	15:09:06.4	147.6	16.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/24	19:07: 8.6	25.405N	95.669E	90.7	4.7			SZGRF
2003/08/24	19:06:58.8	24.743N	94.834E	33N	4.7			NEIC

Myanmar-India border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	19:17:54.5	67.4	77.9	1.1	10	4.7		
	e pP	Z	19:18:17.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/25	23:25: 4.3	17.540N	105.310W	33.0N	5.3	5.7		SZGRF
2003/08/25	23:25:03.2	18.654N	106.707W	33N	5.5	5.4		NEIC

Off coast of Jalisco, Mexico

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PP	Z	23:41:30.5	89.2	300.4					
BUG	e P	Z	23:38:01.3	89.4	300.0	1.9	66	5.5		
	e PP	Z	23:41:30.1							
WLF	e P	Z	23:38:00.9	89.7	299.2	1.1	42	5.6		
	e PP	Z	23:41:32.9							
TNS	e P	Z	23:38:05.0	90.7	300.9	1.4	33	5.5		
	e PP	Z	23:41:39.4							
CLZ	e P	Z	23:38:06.6	90.9	302.5	1.5	31	5.4		
	e PP	Z	23:41:45.0							
BFO	e P	Z	23:38:09.4	91.6	300.8	1.4	16	5.1		
MOX	e P	Z	23:38:13.6	92.2	303.4	1.8	25	5.3		
	e PP	Z	23:41:52.8							
GRA1	e P	Z	23:38:14.1	92.5	303.1	1.4	32	5.6		
	e PP	Z	23:41:56.9							
	e S	N	23:48:53.8							
	e SP	Z	23:50:30.1							
	e SS	N	23:55:40.0							
CLL	e P	Z	23:38:12.9	92.5	304.5	1.2	10	5.1		
	e PP	Z	23:41:55.6							
	e SKSac	E	23:48:45.8							
	e S	N	23:49:20.0							
	e SP	Z	23:50:31.5							
	e SS	E	23:55:32.1							
	e L	Z	00:19:15.6			22.0	1855		5.5	
WERD	e P	Z	23:38:13.8	92.6	304.0	1.5	10	5.0		
	e PP	Z	23:41:55.6							
BRG	e P	Z	23:38:18.0	93.2	305.3	2.3	38	5.3		
	e PP	Z	23:41:59.3							
FUR	e P	Z	23:38:18.1	93.3	303.1	1.3	70	5.8		
WET	e P	Z	23:38:18.9	93.7	304.3	1.5	10	4.9		
GEC2	e P	Z	23:38:21.6	94.3	305.0	2.5	41	5.4		
GRA1	e SKKSdf	N	00:02:40.5	92.5	303.1					
	e L	Z	00:22:58.4			18.2	2534		5.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/25	01:31:54.3	21.050S	175.530W	33.0N				GRSN

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z	01:51:38.7	149.0	15.6	0.9	23			

GRA1	e PKP	Z	01:51:43.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/25	02:05:19.1	6.926S	27.346E	33.0N	4.7			SZGRF

Zaire

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	02:15:11.3	58.3	161.1	1.1	8	4.7		
	e pP	Z	02:15:16.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/25	03:39:24.2	9.047S	100.666E	33.0N	4.9			SZGRF

Southwest of Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:52:50.7	96.5	96.3	1.1	4	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/25	06:28:35.8	14.810N	89.710W	33.0G	5.6	5.7		SZGRF
2003/08/25	06:28:30.5	14.170N	91.349W	35G	5.6	5.6		NEIC

Guatemala

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	06:40:55.6	84.0	284.9	1.4	48	5.5		
BUG	e P	Z	06:40:56.6	84.2	285.5	1.3	46	5.5		
IBBN	e P	Z	06:40:57.2	84.3	285.8	0.9	37	5.6		
TNS	e P	Z	06:41:02.2	85.3	286.5	1.3	91	5.8		
NRDL	e P	Z	06:41:04.3	85.6	287.6	1.3	81	5.8		
BFO	e P	Z	06:41:03.7	85.7	286.6	1.2	50	5.6		
CLZ	e P	Z	06:41:06.0	85.9	287.9	1.4	104	5.9		
RGN	e P	Z	06:41:10.1	86.7	290.0	1.0	100	6.0		
MOX	e P	Z	06:41:11.2	87.1	288.9	1.3	52	5.5		
GRA1	e P	Z	06:41:11.9	87.1	288.6	1.2	99	5.8		
	e		06:41:28.7							
	e PP	Z	06:44:46.6							
	e S	N	06:51:46.8							
	e SS	N	06:57:23.7							
	e L	Z	07:16:13.1			21.9	3257		5.7	
WERD	e P	Z	06:41:13.6	87.5	289.4	1.3	64	5.6		
FUR	e P	Z	06:41:14.9	87.6	288.7	1.2	55	5.5		
CLL	e P	Z	06:41:14.0	87.7	289.9	1.3	52	5.5		
CLL	i P	- Z	06:41:14.4	87.7	289.9	1.3	52	5.7		
	e sP	Z	06:41:30.1							

	e PP	Z	06:44:38.1							
	e SKSac	R	06:51:40.3							
	e S	T	06:51:53.2							
	e SS	R	06:57:39.3							
	e SSS	R	07:01:16.9							
	e LQ	T	07:05:52.4							
	e LR	Z	07:10:12.1							
	e L	Z	07:19:24.7			22.0	3058		5.7	
WET	e P	Z	06:41:17.7	88.3	289.9	1.3	76	5.7		
BRG	e P	Z	06:41:17.5	88.4	290.7	1.3	27	5.2		
GEC2	e P	Z	06:41:20.1	88.9	290.5	1.2	21	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/26								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	00:13:31.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/26	01:33:36.5	49.077N	78.969E	33.0N	4.4			SZGRF

Eastern Kazakhstan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:41:29.4	42.6	63.7	1.1	9	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/26	21:12:23.7				5.6			SZGRF
2003/08/26	21:11:35.9	17.058S	70.590W	31D	5.7			NEIC

Near the coast of Peru

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z	21:24:58.1	95.6	250.5					
BUG	e P	Z	21:25:00.5	96.0	250.0					
TNS	e P	Z	21:25:02.2	96.3	250.8					
IBBN	e P	Z	21:25:03.4	96.5	250.5					
FUR	e P	Z	21:25:07.4	97.4	252.6					
GRA1	e P	Z	21:25:09.2	97.8	252.8	1.3	59	5.6		
	e pP	Z	21:25:19.7							
CLZ	e P	Z	21:25:10.3	97.9	252.4					
NRDL	e P	Z	21:25:10.6	98.0	252.3					
MOX	e P	Z	21:25:11.7	98.3	253.2					
WET	e P	Z	21:25:13.4	98.7	253.9					
WERD	e P	Z	21:25:13.4	98.7	253.7					

	GEC2	e P	Z	21:25:14.9	99.1	254.5				
	CLL	e Pdiff	Z	21:25:16.3	99.3	254.3	1.3	27		
		e pPdiff	Z	21:25:26.8						
		e PP	Z	21:29:11.5						
		e PPP	Z	21:31:21.1						
		e PS	Z	21:38:15.6						
		e SS	R	21:43:42.0						
		e LR	Z	22:00:25.1						
		e L	Z	22:05:21.2			22.0	1571	5.5	
	BRG	e P	Z	21:25:18.5	99.8	255.0				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/26	23:32:59.5	25.540S	179.260W					GRSN

South of Fiji Islands

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	e PKPbc	Z	23:52:52.8	152.6	24.6	0.9	25			
		e PKPab	Z	23:53:01.0			0.8	16			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/26								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	23:53:09.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/26	23:56:24.7	46.480S	168.110E	33.0N				SZGRF
2003/08/26	23:56:26.5	45.470S	166.580E	12				NEIC

South Island, New Zealand

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	BRG	e PKPdf	Z	00:16:24.7	161.1	84.1					
		e PKPab	Z	00:17:10.7							
	GEC2	e PKPdf	Z	00:16:25.4	161.4	89.9					
		e PKPab	Z	00:17:11.9							
	CLL	i PKPdf	+ Z	00:16:25.5	161.6	81.9	1.3	18			
		e PKPdif	Z	00:16:41.8							
		e PKPab	Z	00:17:11.7			1.5	26			
		e		00:17:27.3							
		e PP	Z	00:20:59.1							
		e PPS	Z	00:34:33.2							
		e SS	Z	00:41:32.1							

	e SSS	E	00:47:46.1					
	e L	Z	01:41:41.7			20.0	349	5.2
WET	e PKPdf	Z	00:16:25.4	161.9	88.3			
	e PKPab	Z	00:17:14.3					
WERD	e PKPdf	Z	00:16:25.7	162.2	83.8			
	e PKPab	Z	00:17:15.3					
MOX	e PKPdf	Z	00:16:26.1	162.6	82.5			
	e PKPab	Z	00:17:17.1					
GRA1	e PKPdf	Z	00:16:26.4	162.9	85.1			
	e PKPab	Z	00:17:19.1					
	e PP	Z	00:21:08.0					
	e PPS	Z	00:34:41.4					
FUR	e PKPdf	Z	00:16:26.4	163.0	90.2			
	e PKPab	Z	00:17:18.3					
CLZ	e PKPdf	Z	00:16:27.0	163.1	77.2			
	e PKPab	Z	00:17:19.9					
NRDL	e PKPdf	Z	00:16:27.1	163.1	74.8			
	e PKPab	Z	00:17:20.4					
IBBN	e PKPab	Z	00:17:26.5	164.6	72.2			
TNS	e PKPdf	Z	00:16:28.0	164.6	80.4			
	e PKPab	Z	00:17:26.3					
BFO	e PKPdf	Z	00:16:28.0	164.9	87.2			
	e PKPab	Z	00:17:26.8					
BUG	e PKPab	Z	00:17:28.4	165.1	74.5			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/27	02:06:55.3	6.558S	147.238E	85D	5.1			NEIC

Eastern New Guinea, Papua New Guinea, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	02:25:45.0	123.3	55.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/27	12:38:40.9	3.718N	34.919W	20.2	5.2			SZGRF
2003/08/27	12:38:58.4	6.873N	33.910W	10G	5.0	4.7		NEIC

Central Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	12:48:46.1	57.0	237.0	1.2	33	5.2		
	e pP	Z	12:48:51.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/27	14:40:55.0	44.827N	28.272W	33.0N	5.1	4.5		SZGRF
2003/08/27	14:40:41.7	43.688N	28.849W	10G	5.0	5.0		NEIC

Northern Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	14:46:33.5	27.8	273.1	2.2	87	5.1		
	e S	E	14:51:18.5							
	e L	Z	14:56:19.9			20.9	1404		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/27	21:18:50.5	11.572N	57.738E	33.0N	5.5	4.9		SZGRF
2003/08/27	21:18:44.3	11.484N	57.557E	10G	5.4	5.0		NEIC

Arabian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WET	e P	Z	21:28:00.3	52.7	119.9	1.8	33	5.0		
BRG	e P	Z	21:28:03.5	53.0	122.1	1.9	66	5.2		
FUR	e P	Z	21:28:04.3	53.1	117.7	1.1	91	5.6		
WERD	e P	Z	21:28:08.6	53.6	120.2	1.9	128	5.6		
CLL	e P	Z	21:28:08.8	53.7	121.5	2.0	170	5.7		
	e PP	Z	21:30:14.2							
	e PPP	Z	21:31:25.9							
	e S	E	21:35:47.3							
	e SS	N	21:39:28.4							
	e LR	Z	21:45:24.8							
	e L	Z	21:54:01.7			20.0	851		4.8	
GRA1	e P	Z	21:28:11.0	53.9	118.6	1.2	56	5.5		
	e S	E	21:35:39.2							
	e L	Z	21:56:00.2			19.3	950		4.9	
RUE	e P	Z	21:28:10.9	53.9	123.0	1.5	120	5.7		
MOX	e P	Z	21:28:12.0	54.1	119.6	2.1	142	5.6		
BFO	e P	Z	21:28:17.7	55.0	115.0	1.6	54	5.3		
CLZ	e P	Z	21:28:21.5	55.4	119.1	1.9	138	5.7		
TNS	e P	Z	21:28:23.2	55.7	116.3	1.8	62	5.3		
NRDL	e P	Z	21:28:25.2	55.8	119.3	1.5	103	5.6		
WLF	e P	Z	21:28:31.4	56.8	113.8	1.3	65	5.5		
BUG	e P	Z	21:28:32.4	56.9	115.9	1.9	92	5.5		
IBBN	e P	Z	21:28:33.3	57.0	116.8	2.1	240	5.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/28	04:48:20.3	49.759S	114.651W	10G	5.4	6.1		NEIC

Southern East Pacific Rise

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKP	Z	05:07:56.2	143.5	245.7					

BUG	e	PKP	Z	05:07:53.4	144.1	249.2			
TNS	e	PKP	Z	05:07:57.0	144.3	248.1			
IBBN	e	PKP	Z	05:07:57.6	144.7	250.5			
GRA1	e	PKP	Z	05:08:01.9	145.8	248.6			
	e	PP	Z	05:11:23.2					
	e	SS	N	05:30:12.2					
	e	L	Z	06:05:30.7			20.7	4126	6.2
CLZ	e	PKP	Z	05:08:02.5	146.0	251.2			
NRDL	e	PKP	Z	05:08:02.2	146.1	252.0			
MOX	e	PKP	Z	05:08:02.5	146.4	250.1			
WET	e	PKP	Z	05:08:03.2	146.6	248.5			
WERD	e	PKP	Z	05:08:04.0	146.7	250.1			
GEC2	e	PKP	Z	05:08:04.8	147.0	248.4			
CLL	e	PKPdf	Z	05:08:04.6	147.4	251.7			
	e	PKPbc	Z	05:08:07.0			1.6	200	
	e	PP	Z	05:11:33.0					
	e	PPP	Z	05:14:52.9					
	e	SKKSac	R	05:18:24.3					
	e	SKSP	Z	05:21:51.4					
	e	PPS	Z	05:24:22.3					
	e	SS	R	05:30:27.8					
	e	PSPS	Z	05:31:27.1					
	e	SSS	R	05:35:51.4					
	e	SSSS	T	05:39:56.0					
	e	LR	Z	05:58:48.3					
	e	L	Z	06:09:21.8			22.0	3153	6.1
BRG	e	PKP	Z	05:08:06.4	147.8	251.5			
RGN	e	PKP	Z	05:08:12.5	148.5	256.9			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/28	05:31:21.7	55.901S	146.228E	10G	5.2	5.0		NEIC

West of Macquarie Island

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPbc	Z	05:51:18.8	152.3	118.0	1.1	13			
	e PKPab	Z	05:51:29.0							
GRA1	e PKP	Z	05:51:20.9	152.6	120.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/28	06:38:11.9	7.279S	126.102E	414D	5.7			NEIC

Kepulauan Barat Daya, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e Pdiff	Z	06:51:57.1	110.0	76.2	1.3	10			
	i PKiKP	Z	06:55:56.7			0.9	17			

	e PP	Z	06:56:39.2			
BRG	e PKiKP	Z	06:55:55.4	109.5	77.1	
WERD	e PKiKP	Z	06:55:57.2	110.5	75.2	
MOX	e PKiKP	Z	06:55:57.7	111.0	75.3	
WET	e PKiKP	Z	06:55:58.0	110.6	76.9	
CLZ	e PKiKP	Z	06:55:59.0	111.5	73.8	
	e PP	Z	06:56:48.1			
FUR	e PKiKP	Z	06:55:59.9	111.9	76.0	
GRA1	e PP	Z	06:56:48.2	111.5	75.3	
BUG	e PKiKP	Z	06:56:02.4	113.4	71.3	
	e PP	Z	06:57:03.0			
NRDL	e PKiKP	Z	06:55:59.5	113.0	71.2	
	e PP	Z	06:56:46.4			
TNS	e PKiKP	Z	06:56:03.2	113.1	72.8	
	e PP	Z	06:56:59.3			
WLF	e PP	Z	06:57:09.0	113.8	72.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/28	18:32:25.8	30.815N	51.753E	33.0N	5.0			SZGRF
2003/08/28	18:31:57.2	28.406N	54.098E	33N	4.7			NEIC

Northern and central Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	18:39:20.8	38.8	107.1	1.1	26	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/28	20:38:40.0	22.720S	180.760W	607.2				SZGRF
2003/08/28	20:39:44.2	21.963S	179.535W	566*	5.1			NEIC

Fiji region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPdf	Z	20:58:22.5	147.8	23.6					
	e PKPbc	Z	20:58:26.2							
NRDL	e PKPdf	Z	20:58:23.0	148.6	17.3					
	e PKPbc	Z	20:58:28.2							
CLL	i PKPdf	Z	20:58:24.3	149.1	23.1	1.6	22			
	i PKPbc	Z	20:58:29.4			0.9	112			
	i PKPab	Z	20:58:36.8			0.7	19			
	e pPKPbc	Z	21:00:44.7							
IBBN	e PKPdf	Z	20:58:24.5	149.1	13.3					
	e PKPbc	Z	20:58:29.6							
	e PKPab	Z	20:58:36.6							
CLZ	e PKPdf	Z	20:58:24.2	149.2	18.1					
	e PKPbc	Z	20:58:29.8							
BRG	e PKPdf	Z	20:58:24.9	149.2	25.0					

	e	PKPbc	Z	20:58:29.9		
	e	PKPab	Z	20:58:36.5		
MOX	e	PKPdf	Z	20:58:25.8	150.0	21.0
	e	PKPbc	Z	20:58:31.6		
	e	PKPab	Z	20:58:39.8		
WERD	e	PKPbc	Z	20:58:31.7	150.0	22.4
	e	PKPab	Z	20:58:40.6		
BUG	e	PKPbc	Z	20:58:31.4	150.1	12.7
GRA1	e	PKPbc	Z	20:58:33.9	151.0	20.9
	e	PKPab	Z	20:58:44.2		
	e	pPKPbc	Z	21:00:52.7		
TNS	e	PKPbc	Z	20:58:33.8	151.1	15.4
WET	e	PKPbc	Z	20:58:34.2	151.1	24.4
GEC2	e	PKPbc	Z	20:58:34.1	151.1	26.1
WLF	e	PKPdf	Z	20:58:28.8	151.9	11.3
	e	PKPbc	Z	20:58:36.3		
FUR	e	PKPbc	Z	20:58:36.7	152.4	22.1
	e	PKPab	Z	20:58:50.7		
BFO	e	PKPdf	Z	20:58:30.1	152.9	16.2
	e	PKPbc	Z	20:58:37.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/29	00:51:12.3	17.931S	178.585W	600G	4.7			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e	PKPbc	Z 01:09:41.5	144.1	20.3					
NRDL	e	PKPbc	Z 01:09:43.4	144.8	14.4					
IBBN	e	PKPbc	Z 01:09:45.1	145.3	10.6					
CLZ	e	PKPbc	Z 01:09:45.3	145.4	15.1					
CLL	e	PKPbc	Z 01:09:45.2	145.4	19.7					
BRG	e	PKPbc	Z 01:09:46.1	145.6	21.4					
BUG	e	PKPab	Z 01:09:49.7	146.2	10.0					
MOX	e	PKPbc	Z 01:09:47.8	146.3	17.7					
	e	PKPab	Z 01:09:50.5							
WERD	e	PKPbc	Z 01:09:48.1	146.3	18.9					
TNS	e	PKPbc	Z 01:09:50.6	147.2	12.4					
	e	PKPab	Z 01:09:54.6							
GRA1	e	PKPbc	Z 01:09:50.5	147.3	17.4					
	e	PKPab	Z 01:09:55.3							
WET	e	PKPbc	Z 01:09:51.0	147.4	20.6					
GEC2	e	PKPbc	Z 01:09:51.4	147.5	22.2					
WLF	e	PKPbc	Z 01:09:53.1	148.0	8.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/29	04:27:52.7	26.267S	177.256W	86D	5.3			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	04:47:41.9	153.2	14.8					
IBBN	e PKPbc	Z	04:47:43.5	153.7	10.2					
CLL	e PKPdf	Z	04:47:35.1	153.8	21.2					
	i PKPbc	Z	04:47:42.8			0.9	25			
	e PKPab	Z	04:47:56.0			0.8	16			
	e PP	Z	04:51:27.7							
	e LR	Z	05:41:17.6							
	e L	Z	05:56:29.3			21.9	112		4.6	
CLZ	e PKPbc	Z	04:47:43.4	153.8	15.6					
BRG	e PKPdf	Z	04:47:35.2	154.0	23.4					
	e PKPbc	Z	04:47:43.7							
MOX	e PKPdf	Z	04:47:35.9	154.7	18.9					
GRA1	e PKPab	Z	04:48:03.9	155.7	18.7					
	e PP	Z	04:51:38.6							
WLF	e PKPdf	Z	04:47:39.0	156.5	7.7					
	e PKPab	Z	04:48:07.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/29								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	06:37:51.7							
	e		06:37:55.5							
	e		06:38:02.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/29	06:56:26.9	32.312N	49.603E	33.0N	4.6			SZGRF
2003/08/29	06:55:52.3	28.374N	51.412E	33N	5.4			NEIC

Western Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	07:03:01.5	37.1	109.9	1.2	10	4.6		
	e PcP	Z	07:05:22.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/29	07:07:26.5	50.650N	27.960W	33.0G	5.2			SZGRF
2003/08/29	07:07:17.1	50.558N	28.673W	10G	5.0	4.6		NEIC

Northern Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	07:12:16.1	22.1	285.8	1.2	55	4.9		
BUG	e P	Z	07:12:18.4	22.4	282.0	1.0	100	5.2		
IBBN	e P	Z	07:12:20.8	22.5	280.2	1.1	272	5.6		
TNS	e P	Z	07:12:30.5	23.4	285.3	1.7	124	5.2		
BFO	e P	Z	07:12:34.5	23.9	289.4	1.0	22	4.6		
CLZ	e P	Z	07:12:37.9	24.2	282.6	1.4	164	5.4		
MOX	e P	Z	07:12:46.9	25.3	285.6	1.6	110	5.3		
GRA1	e P	Z	07:12:47.5	25.3	287.4	1.4	192	5.6		
WERD	e P	Z	07:12:51.2	25.7	286.3	1.4	53	5.1		
CLL	e P	Z	07:12:53.0	25.9	284.9	1.0	73	5.3		
WET	e P	Z	07:12:58.2	26.5	289.1	1.5	59	5.0		
BRG	e P	Z	07:12:59.2	26.6	286.2	1.3	51	5.0		
GEC2	e P	Z	07:13:03.7	27.1	289.9	1.5	67	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/29	07:22:17.5	72.915N	7.318E	33.0N	4.5			SZGRF

Norwegian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	07:27:22.8	23.3	357.1	1.7	24	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/29	20:15:21.6	43.005N	17.607E	10.0G				SZGRF
2003/08/29	20:15:18.2	43.049N	17.735E	10G				NEIC

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	20:16:55.8	6.4	152.7					
	e Sn	N	20:18:06.7							
WET	e Pn	Z	20:17:02.6	7.0	149.3					
	e Sn	N	20:18:18.6							
TANN	e Pn	Z	20:17:20.5	8.2	151.9					
	e Sn	N	20:18:47.6							
BFO	e Pn	Z	20:17:20.6	8.4	125.3					
MOX	e Pn	Z	20:17:26.7	8.7	148.9					
TNS	e Sn	N	20:19:22.6	9.6	134.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/30	00:05:27.2	14.820S	167.339E	33N	5.3	5.3		NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML

GRA1	e PKPdf	Z	00:24:49.4	140.1	37.6			
	e pPKPdf	Z	00:25:32.1					
	e pPP	Z	00:28:18.5					
	e sPKSdf	Z	00:29:25.0					
CLL	e PKPdf	Z	00:24:50.1	138.2	38.9	0.9	21	
	e pPKPdf	Z	00:25:26.5					
	e PP	Z	00:27:39.4					
	e pPP	Z	00:28:11.3					
	e sPP	Z	00:28:25.9					
	e sPKSdf	Z	00:29:19.2					
	e sPPP	Z	00:31:22.3					
	e PPS	Z	00:40:11.1					
	e pPPS	Z	00:41:30.6					
	e SS	Z	00:45:44.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/30	01:04:55.7	72.250N	7.640E	33.0G	5.0			SZGRF
2003/08/30	01:04:49.5	72.541N	8.293E	10G	4.8	4.7		NEIC

Norwegian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	01:09:26.6	20.2	355.2	1.5	204	5.1		
IBBN	e P	Z	01:09:26.9	20.2	0.5	2.2	208	5.0		
CLZ	e P	Z	01:09:32.6	20.7	358.2	1.4	68	4.8		
BUG	e P	Z	01:09:36.2	21.1	0.9	1.3	82	4.9		
CLL	e P	Z	01:09:38.6	21.3	356.1	1.7	234	5.2		
BRG	e P	Z	01:09:43.6	21.8	355.4	1.8	105	5.0		
MOX	e P	Z	01:09:45.0	21.9	357.3	1.5	58	4.8		
GRA1	e P	Z	01:09:54.9	22.9	357.7	1.9	236	5.4		
WLF	e P	Z	01:09:53.9	22.9	1.7	1.9	198	5.3		
WET	e P	Z	01:10:01.5	23.5	356.5	2.3	152	5.1		
BFO	e P	Z	01:10:08.3	24.2	360.0	1.5	66	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/30	06:23:44.2	37.387N	147.034E	33.0N	4.9			SZGRF

Off east coast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	06:36:14.6	84.6	33.8	0.8	6	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/30	07:51:43.4	34.021N	138.255E	33.0N	5.0			SZGRF
2003/08/30	07:52:18.6	34.548N	136.863E	334*	4.8			NEIC

Near south coast of eastern Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	08:04:11.1	83.0	42.4	1.1	12	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/30	10:06:49.4	43.160N	143.230E	78.0	5.4			SZGRF
2003/08/30	10:06:39.7	41.923N	142.516E	50D	5.1			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	10:18:23.8	75.7	36.8	2.0	182	5.9		
BRG	e P	Z	10:18:30.5	77.0	36.7	2.0	84	5.5		
CLL	i P	+ Z	10:18:30.3	77.0	36.1	1.0	33	5.4		
	e sP	Z	10:18:52.4							
	e PP	Z	10:21:23.1							
	e sPP	Z	10:21:46.6							
	e sS	E	10:28:45.5							
	e LR	Z	10:44:03.6							
	e L	Z	10:55:18.9			20.0	1911		5.4	
CLZ	e P	Z	10:18:33.8	77.5	34.4	1.1	42	5.5		
WERD	e P	Z	10:18:36.1	77.9	35.5	1.9	56	5.4		
IBBN	e P	Z	10:18:36.1	78.0	32.7	1.1	41	5.5		
MOX	e P	Z	10:18:36.5	78.0	35.1	1.5	43	5.4		
GEC2	e P	Z	10:18:40.3	78.7	36.2	1.8	46	5.2		
WET	e P	Z	10:18:41.1	78.8	35.7	1.3	42	5.3		
BUG	e P	Z	10:18:40.8	78.9	32.3	1.1	36	5.3		
GRA1	e P	Z	10:18:42.2	78.9	34.7	1.1	60	5.5		
	e pP	Z	10:19:02.9							
GRFO	e P	Z	10:18:42.3	78.9	34.7	1.1	49	5.4		
TNS	e P	Z	10:18:44.6	79.5	32.9	1.5	36	5.2		
FUR	e P	Z	10:18:48.6	80.2	34.6	0.9	46	5.4		
WLF	e P	Z	10:18:51.4	80.7	31.3	2.1	93	5.5		
BFO	e P	Z	10:18:53.2	81.1	32.7	1.6	71	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/30	21:04: 3.1	72.838N	4.912E	33.0N	4.2			SZGRF

Norwegian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	21:09:08.7	23.3	355.3	2.0	18	4.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/31	06:02:36.9	50.751N	26.506W	33.0N	4.7			SZGRF
2003/08/31	06:02:19.1	50.563N	28.646W	10G	4.4			NEIC

Northern Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	06:07:48.3	25.3	287.4	1.5	37	4.7		
	e pP	Z	06:07:56.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/31	09:02:53.5	26.325N	136.801E	33.0N	4.9	4.8		SZGRF

West of Bonin Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	09:15:49.8	90.0	46.8	1.1	9	4.9		
	e PP	Z	09:19:24.7							
	e L	Z	10:07:04.4			21.1	421		4.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/31	09:01:31.8	10.537N	146.262E	57D	5.8			NEIC

West of Bonin Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e Pdiff	Z	09:15:40.6	106.4	48.3	1.5	22			
	e PKiKP	Z	09:19:50.6							
	e PP	Z	09:20:08.4							
	e PPP	Z	09:22:25.0							
	e PS	Z	09:29:28.0							
	e PPS	Z	09:30:17.1							
	e SS	T	09:35:02.1							
	e LR	Z	09:52:34.1							
	e L	Z	10:09:23.7			18.0	485		5.1	
GRA1	e Pdiff	Z	09:15:49.9	108.1	47.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/31	12:43: 5.5	12.660N	121.210E	20.3	5.4	5.3		SZGRF
2003/08/31	12:43:13.9	13.853N	119.809E	33N	5.3	4.9		NEIC

Mindoro, Philippine Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	12:56:05.5	88.5	69.0	1.9	93	5.7		
BRG	e P	Z	12:56:07.9	89.0	69.1	1.7	44	5.5		
CLL	i P	- Z	12:56:09.1	89.3	68.4	1.4	20	5.2		
	e pP	Z	12:56:15.1							

	e S	N	13:07:02.0						
	e PS	Z	13:08:16.2						
	e L	Z	13:44:00.8			18.0	1709		5.5
GEC2	e P	Z	12:56:11.8	89.8	68.9	1.5	21	5.3	
WERD	e P	Z	12:56:12.4	90.1	67.8	1.3	18	5.2	
WET	e P	Z	12:56:13.5	90.2	68.3	1.5	16	5.1	
MOX	e P	Z	12:56:14.4	90.4	67.3	1.5	25	5.3	
CLZ	e P	Z	12:56:15.5	90.7	66.3	1.5	37	5.5	
GRA1	e P	Z	12:56:17.3	91.0	67.0	1.0	15	5.4	
	e pP	Z	12:56:23.2						
	e L	Z	13:45:37.5			18.1	912		5.3
TNS	e P	Z	12:56:23.7	92.4	64.8	1.8	30	5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/31	12:58:58.3	15.757N	120.086E	33.0N	4.9	5.2		SZGRF
2003/08/31	12:58:50.1	13.846N	119.747E	33N	4.8	5.2		NEIC

Luzon, Philippine Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	13:11:53.3	91.0	67.0	1.3	9	4.9		
	e L	Z	13:45:37.5			18.1	912		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/31	23:08: 3.7	44.200N	133.290E	493.0	6.1			SZGRF
2003/08/31	23:08:00.2	43.414N	132.234E	481D	5.6			NEIC

Priamurye-Northeastern China border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	23:18:28.6	70.5	42.7	1.2	254	6.2		
BRG	e P	Z	23:18:35.0	71.6	42.4	1.1	115	5.9		
CLL	i P	- Z	23:18:35.2	71.7	41.9	0.7	219	6.4		
	e pP	Z	23:20:19.5							
	e PP	Z	23:21:24.3							
	e PPP	Z	23:23:10.6							
	e S	T	23:27:16.4							
	e SP	N	23:27:52.7							
	e sS	T	23:30:19.5							
	e SS	E	23:31:51.4							
	e SSS	T	23:35:27.6							
	e sSSS	T	23:37:40.5							
CLZ	e P	Z	23:18:39.7	72.3	40.4	0.8	243	6.4		
WERD	e P	Z	23:18:41.0	72.6	41.3	1.1	110	5.9		
MOX	e P	Z	23:18:41.6	72.7	40.9	1.5	149	5.9		
IBBN	e P	Z	23:18:43.0	73.0	38.8	0.9	197	6.3		
GEC2	e P	Z	23:18:44.4	73.2	41.8	1.2	99	5.8		

WET	e P	Z	23:18:45.4	73.3	41.4	0.8	107	6.0
GRA1	e P	Z	23:18:47.6	73.6	40.5	0.7	353	6.5
	e pP	Z	23:20:32.4					
BUG	e P	Z	23:18:47.9	73.9	38.3	0.8	140	6.0
TNS	e P	Z	23:18:50.9	74.4	38.8	0.9	84	5.8
FUR	e P	Z	23:18:53.8	74.8	40.2	1.1	258	6.2
WLF	e P	Z	23:18:58.2	75.7	37.3	1.1	83	5.8
BFO	e P	Z	23:18:59.5	75.9	38.4	1.0	198	6.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/08/31								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	23:49:00.3							

Format description
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(K. Klinge Email:klinge@szgrf.bgr.de and A. Schick)

In general all regional and teleseismic events clearly recorded with GRF-Array stations and stronger events recorded with stations of the German Regional Seismological Network (GRSN) are included in this bulletin.
Additionally, some selected events are analysed more comprehensively at CLL-station and included in the bulletin (ISOP-analysis).
Each event is reported by several EPICENTER LINES with possible COMMENT LINES, a REGION LINE and a block of PHASE LINES.

EPICENTER LINES:

The epicenter locations of several authorities can be reported. The epicenter location with the highest priority (i.e. the most reliable one) is written in the undermost EPICENTER LINE. The REGION LINE and all origin related parameter in the PHASE LINES (i.e. Def, Dist, EvAz) are determined regarding this epicenter location with the highest priority.

Date	Date of the event
Origin Time	Origin time of the event
Lat	Geographic latitude (N/S) of epicenter in degree
Long	Geographic longitude (E/W) of epicenter in degree
Depth	Depth of the hypocenter beneath the surface in kilometer Appended flag indicates the method by which the depth was determined: BLANK - free N - preset depth of 33 kilometer

G - geophysicist preset depth

mb, Ms, ML Magnitudes of the event and magnitude type

Source Abbreviations for the authority (e.g. SZGRF, NEIC, PIDC, SED)

COMMENT LINE:

Each EPICENTER LINE can be followed by a COMMENT LINE about interesting topics submitted by the preceding authority.

REGION LINE:

The region name of the epicenter location with the highest priority (undermost EPICENTER LINE).

PHASE LINE:

Sta	Station code of the reported phase
Phase	Preceded flag for the sharpness of the onset of the phase e - emergent i - impulsive w - weak ISC phase code Flag for the direction of the first motion '+' - compression '-' - dilatation Component where the phase was picked
Time	Arrival time of the reported phase
Dist	Distance from the epicenter location with the highest priority to the station in kilometer
BAz	Backazimuth from the epicenter location with the highest priority to the station in degree
T[s]	Phase Period
A[nm]	Phase Amplitude
mb	Body wave magnitude
MS	Surface wave magnitude
ML	Local Richter magnitude